JUN 10 1920

VOLUME 33—N. S. VOL. 1 NUMBER 6

ARCHIVES
OF
DERMATOLOGY AND SYPHILOLOGY

(Succeeding the Journal of Cutaneous Diseases)

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JUNE, 1920

PUBLISHED MONTHLY BY AMERICAN MEDICAL ASSOCIATION, 535 NORTH DEARBORN STREET, CHICAGO, ILLINOIS ANNUAL SUBSCRIPTION, $8.00

Entered as Second Class Matter, October 30, 1917, at the Postoffice at Chicago, Illinois, Under Act of Congress of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized on July 29, 1918.

CONTENTS OF PREVIOUS NUMBERS

FEBRUARY, 1920. NUMBER 2

V.—Monilia Candida Infection of the Mouth. M. F. Engman, M.D., and R. S. Weiss, M.D., St. Louis.

VI.—"Burning Tongue." M. F. Engman, M.D., St. Louis.

Syphilis of the Liver. Udo J. Wile, M.D., Ann Arbor, Mich.

Ulcerating Granuloma of the Pudenda: A Review of the Literature with a Bibliography and Some Observations of the Disease as Seen in Porto Rico. Herman Goodman, M.D., New York.

Erosive Vulvitis. Thomas Dwight Driscoll, M.D., Richmond, Va.

The Boler Keratosis and Cutaneous Cancer. James N. McCoy, M.D., Vincennes, Ind.

Dermatologic Mimeograph. Moses Scholss, M.D., Los Angeles.

Obituary: Henry Weightman Stelwagon.

Correspondence:
"The Tyranny of the Wassermann Test." A Benevolent Heretic. Walter James Highman.
"Lipiuria Probably Due to Syphilis." Richard L. Sutton.

Abstracts from Current Literature.

Society Transactions:
Manhattan Dermatological Society.
New York Dermatological Society.

Book Reviews: Le Traitement de la Syphilis par les Composes Arsenicaux. Dr. Lacapere.

Index to Current Literature.

MARCH, 1920. NUMBER 3

Laboratory and Clinical Studies Bearing on the Causes of the Reactions Following Intravenous Injections of Arsphenamin and Neo-Arsphenamin. Jay F. Schamberg, M.D., John A. Kolmer, M.D., George W. Raiziss, Ph.D., and Charles Weiss, Ph.D., Philadelphia.

Neurotic Excoriations. George M. MacKee, M.D., New York.

Neurotic Excoriations with Report of Cases. William A. Pusey, M.D., and Frances E. Senear, M.D., Chicago.

Venereal Ulcer. George M. Olson, M.D., Minneapolis.

Osseous Formations in Lupus Erythematosus. William B. Trimble, M.D., New York.

Report of Two Cases of Idiopathic Hemorrhagic Sarcoma (Kaposi). The First Complicated with Lymphatic Leukemia. Harold N. Cole, M.D., and Edward S. Crump, M.D., Cleveland.

VII.—Camphor Oil Tumors. William H. Mook, M.D., and Willard C. Wandre, M.D., St. Louis.

Abstracts from Current Literature.

Society Transactions:
New York Academy of Medicine, Section on Dermatology and Syphilis.
Manhattan Dermatological Society.
Minnesota Dermatological Society.

Index to Current Literature.

APRIL, 1920. NUMBER 4

Cultural Studies on the Infection of the Skin by Endomyces Albicans. Fred W. Rosser, Ph.D., and Bertram Feuer, M.S., Urbana, Ill.

VIII.—A Peculiar Fungus Infection of the Skin (Sporipsis). Martin F. Engman, M.D., St. Louis.

Necessary Findings in a Case of Long-Standing Scleroderma and Sclerodactylia. Fred D. Weidman, M.D., Philadelphia.

Congenital Ectodermal Defect, with Report of Case. W. H. Goeckermann, M.D., Rochester, Minn.

Syphilis of the Kidney, Ureter and Suprarenal. Udo J. Wile, M.D., Ann Arbor, Mich.

Saturation in Roentgen Therapy: Its Estimation and Maintenance. Leo M. Zeisler, M.D., Ann Arbor, Mich.

Treatment of Chancroid with the High Frequency Vacuum Electrode and Copper Sulphate Solution. Louis B. Jacobi, M.D., Philadelphia.

A Case of Acquired Circumscribed Hyperhidrosis. William Allen Pusey, M.D., Chicago.

Abstracts: The Report for the Study of Hookworm in America.

Correspondence: "Dermatologic Mimeograph." George Henry Fox.

Abstracts from Current Literature.

Society Transactions:
Manhattan Dermatological Society.
New York Dermatological Society.
Chicago Dermatological Society.

Index to Current Literature.

MAY, 1920. NUMBER 5

The Pathology of Congenital Syphilis. J. Frank Pease, M.D., New York.

IX.—Mycosis Fungoides. W. H. Hesse, M.D., St. Louis.

Purpura Annularis Telangiectodes (Majocchi). Discussion by Ludwig Weiss, M.D., New York.

Visceral Syphilis. Udo J. Wile, M.D., Ann Arbor, Mich.

A Practical Method of Roentgen-Ray Dosage Without the Skin Erythema. William D. Witherbee, M.D., and John Reiner, M.D., New York.

Acrodermatitis Chronica Atrophicans, with Report of Case. Moses Scholss, M.D., Los Angeles.

Obituary: Frederick J. Levinsen.

Correspondence: The Arsphenamin Treatment of Tuberculids. John H. Stokes, M.D., Rochester, Minn.

Abstracts from Current Literature.

Society Transactions:
Chicago Dermatological Society.

Index to Current Literature.

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Archives of Dermatology and Syphilology

VOLUME 38—N. S. VOL. 1 JUNE, 1920 NUMBER 6

X.—PRECANCEROUS LESIONS OF THE SKIN OF THE VULVA

LEUKOPLAKIC VULVITIS, KRAUROSIS, PRURITUS *

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ST. LOUIS

Nowhere is there a more fascinating field for the study of precancerous lesions than in the peculiar inflammatory conditions occasionally found in the vulva of old women. Only the comparative rarity of these conditions presents a bar to their satisfactory study. Those in the past who have based their views on one or two clinical observations, or who have not subjected their material to careful histologic study, have gone astray in their conclusions, and the confusion and difference of opinion that have been so marked in most of the articles written on this subject are largely due to this fact. The articles of Jayle and Bender in French, and Berkeley and Bonney in English literature deserve special consideration. My own material, gathered in the course of the past ten years, largely from the clinic of the Barnard Free Skin and Cancer Hospital (services of Dr. Gellhorn and myself) comprises thirty cases, twenty-three of which were complicated by malignant degeneration.

In most cases the malignant process involved only a comparatively small portion of the diseased area so that the precancerous lesion could be studied independently of the cancer. In all but five of the cases ample material for histopathologic study was obtained; sections were taken from four or five different areas, and the tissues stained with hematoxylin-eosin, Weigert, neutral and acid orcein, and glycerin-ether-polychrome-methylene-blue. In addition, pieces of vulvar tissue were obtained for comparative histologic study from normal and senile vulvae, pruritus vulvae and vulvar scars, and they were treated by the same staining methods.

On the clinical side also it was felt desirable to obtain more accurate information for comparative study. The normal variations in the senile

* Studies, reports and observations from the dermatological departments of the Barnard Free Skin and Cancer Hospital and the School of Medicine, Washington University, St. Louis, Mo., U. S. A., service of Drs. M. F. Engman and W. H. Mock.

involution of the vulva after the menopause has received but scanty mention in anatomic and gynecologic literature. Thibierge, who has written a good article on precancerous conditions of the vulva, states that he has seen all grades of vulvar atrophy and "is tempted to believe" that the extreme form of obliteration of folds does not vary greatly from the so-called "kraurosis vulvae." He made, however, no systematic study along this line. I, therefore, undertook an accurate study of the vulva in 100 women beyond the menopause, noting the age, number of children, age at menopause, general condition of the skin (dryness, elasticity, freckles, keratoses, warts, naevi, etc.), and the local genital condition (size of labia minora and clitoris, dryness, color, elasticity, scars, presence of vaginal discharge, etc.). The majority of these women were inmates of the City Infirmary and their average age was 67 years. I divided the cases in accordance with the amount of labial atrophy into four groups as shown in the following table:

TABLE 1.—Classification of Cases Studied by Author

	Labia Minora	Number of Cases	Average Age	Nulliparae, Percentage	Extreme General Skin Atrophy, Percentage	Vaginal Discharge, Percentage
Slight atrophy	0.5-1.5 m. high	21	66	42	46	14
Moderate atrophy	3-5 mm. high	33	67	41	51	12
Marked atrophy	1-2 mm. high	33	71	19	46	18
Extreme atrophy	Obliterated	13	68	11	52	23

The conclusions from this portion of my study are:

1. All variations of vulvar atrophy are encountered.

2. They are independent either of age, or of the amount of atrophy in other parts of the skin or of the amount of vaginal discharge.

3. The extreme forms of atrophy are more common in those women who have had children.

4. Cases of extreme atrophy present at times a markedly dry and brittle skin that cracks open on merely separating the labia for inspection.

5. In spite of frequent lack of cleanliness, pruritus was only rarely present.

PATHOLOGIC CONDITIONS STUDIED

Turning now to the special pathologic conditions that come under consideration, we can distinguish four fairly well defined clinical entities; pruritus vulvae, kraurosis vulvae, leukoplakic vulvitis and carcinoma vulvae.

Simple Pruritus Vulvae.—This condition is not specially a disease of old age. It is often associated with general pruritus of the skin of toxic or unknown origin. Leukorrheal discharge from the vagina and rectal irritation from hemorrhoidal infection are common predisposing

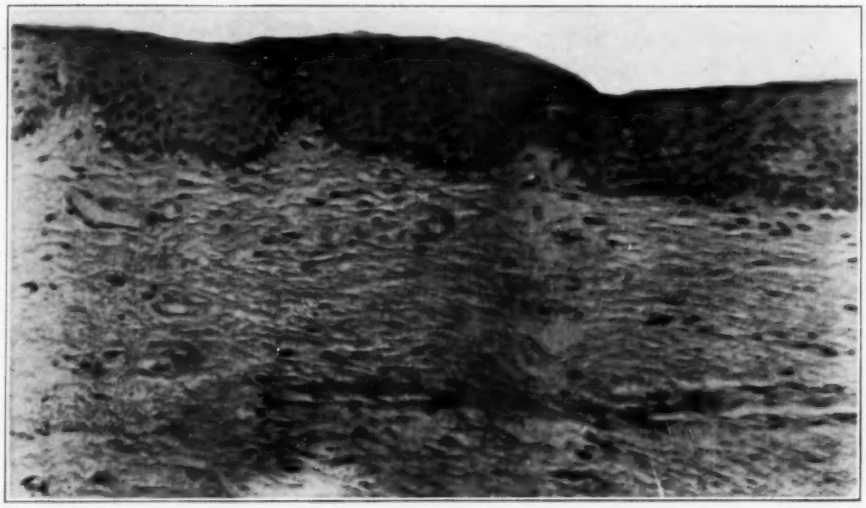

Fig. 1.—Normal senile skin of vulva.

Fig. 2.—Skin of perineum in pruritus of vulva (Weigert's elastic stain). Elastic tissue practically normal; some acanthosis and parakeratosis.

factors, as evidenced by the relief experienced after correction of these ailments. Vulvar atrophy is not present and the only skin changes are those found elsewhere as a result of scratching, slight excoriations and at times a lichenification of the skin. There is no tendency to malignant changes.

Kraurosis Vulvae.—This condition is the result of repeated traumatism with low grade infection occurring usually in women after the menopause, in whom the extreme form of vulvar atrophy described above is present. Especially in younger women after postoperative menopause, do we find the factors favorable to its production. Apparently the skin is more brittle and the frequent slight traumatism of coitus leads to a chronic vulvitis with scar tissue formation and gradual shrinkage and sclerosis of the vulvar opening. Dyspareunia is pronounced, and is the chief symptom of which the patients complain. Pruritus is almost always absent, but a burning sensation is often felt. There is no tendency to malignant degeneration in kraurosis.

TABLE 2.—Leukoplakic Vulvitis without Carcinoma

Name	Age	Children	Area Involved	Kraurosis	Duration of Pruritus	Treatment	Result
1916. Cu.	66	Single	Butterfly area over perineum.	—	10 years	Excision	Cure 4 years
1917. Ha.	27	3	One third of right labium...	—	8 years	Excision (partial)	Recurrence March, 1920
1917. Mo.	49	0	Both labia and clitoris.....	—	4 years	None	Not followed
1917. Sm.	57	3	Both labia, clitoris and perineum	+	11 years	Corpus luteum	Improved. Died of apoplexy, 1919
1918. Fu.	66	8	Both labia, clitoris and perineum	+	10 years	Radium	Recurrence. Excision and radium in 1919.
1919. Hi.	62	3	Labia excised, perineum and anal margin	+	13 years	Excision 2 x	Marked relief Incomplete excision first. Last operatoo recent. Improved.
1919. Wh.	62	1	Both labia, clitoris and perineum	+	14 years	Excision	Relief. Died from tabes, Feb., 1920

Leukoplakic Vulvitis.—This condition is with reasonable certainty to be attributed to peculiar skin changes resulting from a cessation of ovarian function. In from 90 to 95 per cent. of the cases the disease comes on after the menopause, and in the rare cases where it comes earlier, some disturbance of ovarian function can usually be noted. The skin changes, as will be shown more fully later, consist primarily of an absorption of elastic tissue from the uppermost layers of the corium over a portion or all of the vulva internal to the hairy portion of the labia majora. Such absence of elastic tissue leads readily to slight breaks in the epidermis with resulting low grade infection of the underlying connective tissue. The exudate thus produced leads to pru-

Fig. 3.—Leukoplakic vulvitis, Stage 1; marked lymphocytic infiltration of dermis, acanthosis of epidermis; some hyperkeratosis.

Fig. 4.—Leukoplakic vulvitis, Stage 1 (Weigert's elastic stain); absence of elastic tissue in upper layers of dermis, leukocytic reaction directly beneath the epithelium.

Fig. 5.—Leukoplakic vulvitis, Stage 2; showing increase of eleidin layer, hyperkeratosis and beginning hyalinization of the connective tissue.

ritus, which in the vast majority of instances (90 per cent. in my series) is the most prominent symptom of the disease. The pruritus in turn leads to increased traumatism and so the vicious circle is completed, the pruritus increasing and finally resulting in the thickened epithelial plaques which more or less fully cover the entire area diseased. Some writers have tried to see some relationship between these leukoplakic areas and syphilis, but in only two of our series was the Wassermann test positive and neither of these presented active syphilitic lesions. Furthermore, the disease is primarily one of old age whereas syphilis

Fig. 6.—Leukoplakic vulvitis, Stage 3; showing pronounced keratosis, frayed out appearance of basement membrane of epidermis, marked hyalinized dermis, lymphocytic reaction, absence of elastic tissue.

in its active form occurs in younger persons. Antisyphilitic treatment leads to no change in the leukoplakic vulvitis (Pichevin). The same criticism holds against those who attribute leukoplakic vulvitis to the irritation of vaginal discharge. In practically all of my cases such a discharge was absent. Perruchet and other have often found leukoplakic vulvitis associated with chronic arthritis or, as we would term it now, focal infection. In five of my cases a definite history of focal infection with the joint symptom was obtained, and I do not consider it unlikely that some relationship may be found to exist between

leukoplakic vulvitis and focal infection. In one instance excision of the vulva was coincident with marked improvement of rheumatic pains. The frequent association of leukoplakic vulvitis with an obliteration of the vulvar folds, such as we find in kraurosis, led early observers, such as Breisky, to believe that this obliteration was an essential part of the clinical picture. In the twenty cases of leukoplakic vulvitis of

Fig. 7.—Leukoplakic vulvitis involving also peri-anal region with kraurosis of labial tissue and carcinoma of left labium.

my series, such a kraurotic vulva was found ten times. From this we would, it appears, be justified in concluding that the extremely atrophic vulva is more apt than the moderately atrophic vulva to have superimposed on it an intensive elastic tissue atrophy with formation of leukoplakic vulvitis. The extent of the leukoplakic area varies from patches 2 to 4 cm. in diameter localized over a single area in the labial or perineal region to the more common form in which the entire labial

surface, including the perineum and at times even the peri-anal region, is involved. The skin is dry and has a peculiar pearly-white, at times mottled appearance with numerous excoriations, a parchment-like feel and occasional slightly elevated plaques. Leukoplakic vulvitis shows a marked tendency to malignant degeneration. Perruchet found carcinoma in sixteen of nineteen cases. In our own series, fourteen of twenty cases had developed into a carcinoma.

TABLE 3.—LEUKOPLAKIC VULVITIS WITH CARCINOMA

Name	Age	Children	Leukoplakic Area	Kraurosis	Duration of Pruritus	Duration of Carcinoma	Treatment	Result
1912. Ba.	37	2	Right labia minus.	—	4 years	2 months	Operation refused	Not traced
1914. Kl.	60	Single	Entire vulva.....	—	5 years	1 year	Excision 2 x	Died 1917, carcinoma
1915. Du.	65	0	Entire vulva and anus	+	5 years	7 months	Excision	No recurrence 1919
1915. Ka.	35	5	Both labia	—	1½ years	6 months	Excision	No recurrence 1920
1915. Tu.	60	9	Entire vulva and anus	+	22 years	1½ years	Excision	No recurrence 1920
1916. Br.	77	4	Upper half of labia	—	1 year	1 year	x-ray	Died without operation
1916. Ho.	66	Single	Entire vulva.....	—	2 years	1 year	Excision	Died postoperative 7 days
1916. Mu.	65	0	Entire vulva.....	—	Not present	1½ years	Excision	Died postoperative first day
1918. Eo.	56	Single	Entire vulva	+	6 months	3 months	Excision	Died 1919, recurrence carcinoma
1918. El.	72	3	Both labia	+	5 months	2 months	Radium	Died 1919
1918. Th.	68	4	Entire vulva and anus	+	30 years	9 months	Excision	No recurrence 1920
1919. Ho.	62	11	Clitoris and labia.	+	1 year	3 months	Excision	No recurrence 1920
1918. Me.	80	?	Labia only	—	?	?	Radium	Died 1919
1919. Si.	77	9	Labia only	—	1 year	4 months	Radium	Not improved

Carcinoma Vulvae.—Like leukoplakic vulvitis, carcinoma is essentially a disease of old age. The average age in our series was 59 years. In only three of our twenty-three cases was menstruation still present. In view of the frequency of perineal lacerations and the extreme rarity of vulvar carcinoma, as well as the fact that multiparity is not specially associated with this form of cancer, it would seem that such perineal tears play a negligible factor in its etiology. Furthermore, the perineal region is only rarely and usually secondarily involved in the disease. Tertiary syphilitic ulceration was in two instances definitely associated with and probably an etiologic factor in the cancerous process. Both times the cancer developed from the edge of a typical tertiary lesion in women who had a positive Wassermann test and active syphilitic lesions elsewhere. Both were younger women. Dr. Gellhorn has observed a similar coincidence of the two diseases in one of his cases. A definite history of trauma preceding the cancer was obtained from two patients, so definite that it is not improbable to consider it an important factor.

One patient developed a cancer from the edge of a typical acuminate wart. In this patient the entire vulva was covered with such warty excrescences. In four cases no etiologic factors were to be found. Finally, there remained fourteen typical cases of leukoplakic vulvitis

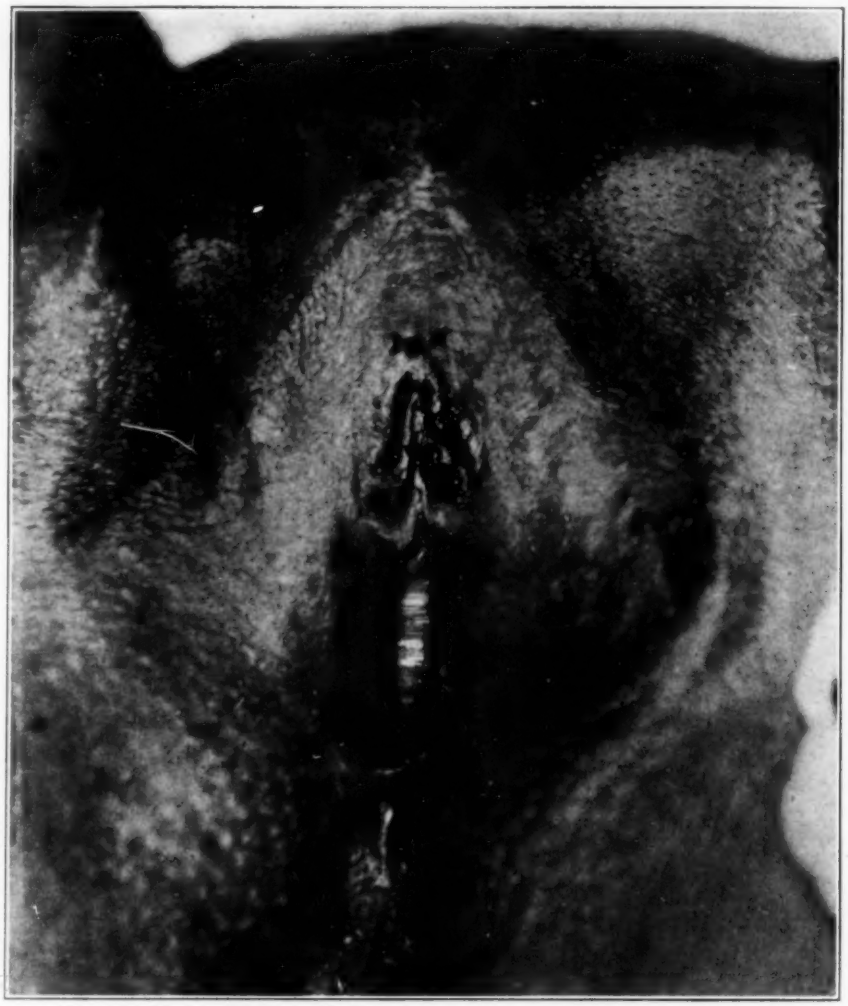

Fig. 8.—Leukoplakic vulvitis with carcinoma beginning in region of clitoris.

leading to a carcinoma. Some writers go so far even as to state that in every vulvar carcinoma a leukoplakia precedes it, but this would not be sustained in my series. The disease varies greatly in its malignancy. Sometimes the entire vulva is covered by an infiltrated cancerous ulcer within a few months; in other cases, the disease may persist as an

indolent ulcer for years. In the group I observed, those that had developed an extreme atrophy in the so-called kraurotic type, were distinctly more benign. In the ten kraurotic patients developing cancer the pruritus had lasted on an average for eleven years; in the other cases, the average duration of pruritus or other local symptoms was only one and a half years. Not only did they develop more slowly, but when removed by operation, they also showed a considerably higher percentage of permanent cure. At best, however, vulvar carcinoma has a high mortality because of the frequency with which the tributary lymph glands are involved early in the disease. The first symptoms are usually pruritus or burning after urination. This becomes associated with a rather free blood-tinged discharge which later becomes malodorous. Pain occurs only after extension to surrounding nerve trunks or as a result of glandular involvement.

TABLE 4.—CARCINOMA OF VULVAE WITHOUT LEUKOPLAKIC VULVITIS

Name	Age	Chil-	Probable Cause	Duration of Carcinoma	Treatment	Result
1911. Ma.	71	6	Trauma.....	1¼ years	Excision	Rapid recurrence; death, 1912
1911. Yo.	59	0	Not determined...	1 year	Excision	Recurrence; death, 1912
1912. Be.	27	0	Syphilis.....	2 months	Excision	Recurrence, death 4 months late
1914. Kl.	66	0	Not determined...	1½ years	Excision (partial)	Recurrence; died, 1918
1914. Ad.	55	6	Not determined...	8 months	Roentgen ray	No relief. Death 5 months later
1916. De.	43	4	Trauma.....	7 months	Excision	Not traced
1916. Sch.	33	2	Acuminate warts.	1 month	Roentgen-ray excision (incomplete)	Recurrence; death 4 months later
1918. He.	52	Single	Not determined...	5 months	Radium	No improvement; death, 1919
1919. Spr.	40	Single	Syphilis.....	1 month	Refused operation	Not traced

HISTOPATHOLOGY

The normal vulvar skin in women beyond the menopause shows varying degrees of atrophic change. The epidermis is thinner; the papillary bodies are less prominent, and at times even absent; the connective tissue of the dermis is more sclerotic with relatively few cells; and the elastic tissue is equally distributed though not quite so abundant as in younger women.

In the case of ordinary pruritus not due to leukoplakic vulvitis, we find changes in the epidermis such as acanthosis and parakeratosis, but no lesions in the corium. The elastic tissue is of normal amount and distribution.

Leukoplakic vulvitis has been divided into four stages by Berkeley and Bonney.[1] According to them, in the first stage, there is marked

1. Berkeley and Bonney: Trans. Royal Soc. Med. **3**: P. 2, 29, 1909.

leukocytic infiltration directly beneath the epidermis but no other changes in the dermis. With these findings I cannot agree. Even in the earliest stages there is a distinct elastic tissue atrophy, so that I am inclined to believe that the elastic tissue changes are primary rather than secondary. Engman suggests that the absence of elastic tissue in the underlying corium tends to make the epidermis less coherent so that a slight traumatism would lead to breaks in the epithelial covering. This would result in infection of the dermis from without, and this in turn to exudation. Pruritus would inevitably follow and tend to renewed bruising of tissues and to chronic infection of the affected area.

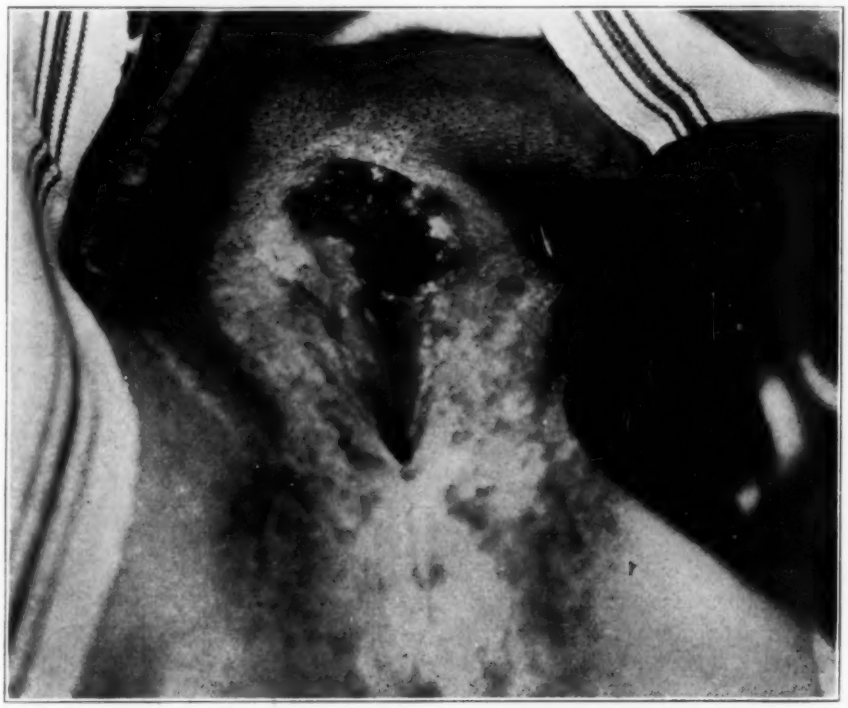

Fig. 9.—Leukoplakic vulvitis with marked kraurosis and carcinoma of clitoris.

It is striking also that with but few exceptions leukoplakic vulvitis is symmetrical and follows the distribution of the endings of one or more branches of the pudic nerve. Usually the entire vulvovestibular region is involved. In others, as in 1916-Cu. (see Table 1), the lesion extended from the midline symmetrically over the perineum.

Stages 2 and 3 as described by Berkeley and Bonney show progressive changes in the epidermis and dermis. My sections correspond closely to their description. Carcinoma may arise in either of these

stages, but the earlier its origin the more malignant its course. In many instances sections from different areas showed varying stages of development, but where Stage 3 predominated, the carcinoma was more apt to assume the everting type of development, to grow more slowly, and, when removed by operation, to show a higher proportion of permanent cures.

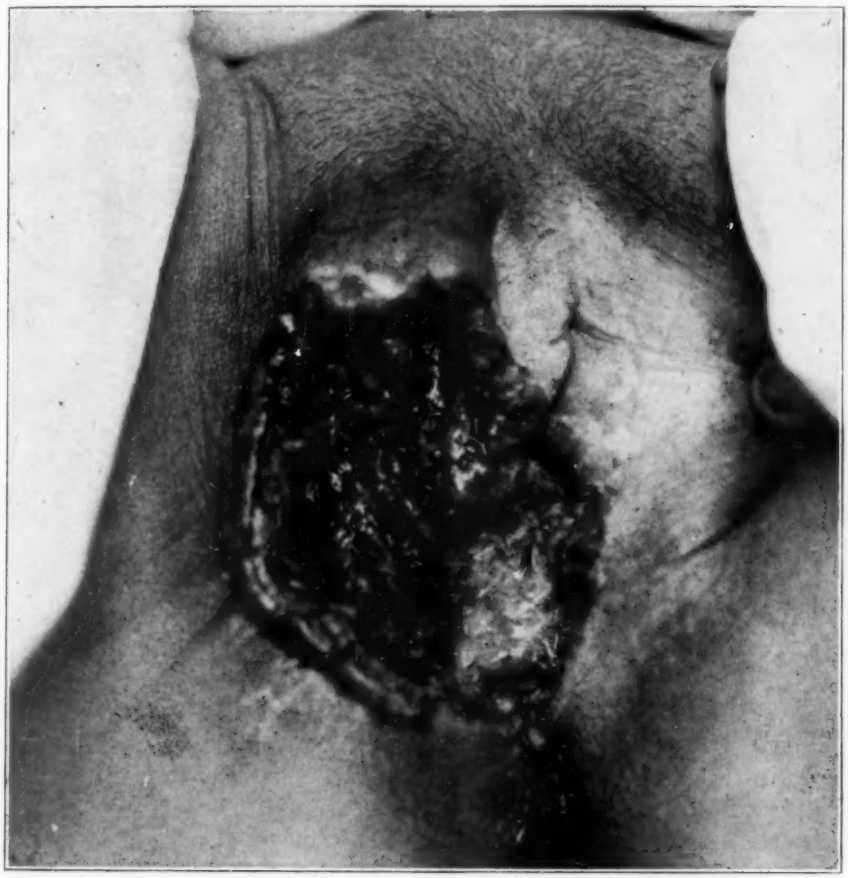

Fig. 10.—Leukoplakic vulvitis limited to upper portion of labia and clitoris, without kraurosis, but with advanced carcinoma of right labium and perinenum.

Stage 4 in Berkeley and Bonney is supposed to show the final or healed lesion and is characterized by atrophy of the epithelium and sclerosis of the connective tissue. I could find nowhere in my series any evidence of such a final stage in the disease, nor do I find any mention of this outside of these two writers. In their articles they do not give sufficient details to justify such an assumption. In my

experience, leukoplakic vulvitis may show periods of temporary improvement, but is not cured. In two thirds of the cases it leads to cancer and in the remaining, persists until the death of the patient, unless excised. We certainly cannot accept Berkeley and Bonney's description of the cured lesion without more definite proof.

TREATMENT

The treatment of simple pruritus vulvae usually consists in finding the special irritative factors — leukorrhea, rectal infection, toxic condition, etc.— and removing it, if possible. Local applications are usually of only temporary benefit. In the more pronounced kraurosis with dyspareunia, an incision widening the vaginal outlet will at times be necessary. Leukoplakic vulvitis will often improve for a time under antipruritic healing lotions, but recurrent attacks always follow until more radical measures are employed. In three instances I used radium, but with only temporary improvement after a period of extremely painful radium reaction. In fact, the reaction in these cases is so severe and the relief so comparatively slight that I strongly advise against its use. Roentgen-ray treatment is equally ineffective in the experience of most writers. On the other hand, complete excision of the affected skin leads to cure in a high percentage of cases. It is also indicated because of the marked frequency of malignant change. In those instances in which recurrences have been noted, the excision as done by me or by a previous operator had been insufficiently wide in extent. In cancer of the vulva roentgen-ray and radium treatment have given most unsatisfactory results. My own experience has been more with the use of radium. It is almost impossible to avoid pronounced radium reaction in the dosage necessary to affect a cancer, and invariably I have found that the partial local retrogression did not justify the extreme pain produced by the local irritation. Grandular involvement is almost invariably present so that surgery is distinctly to be preferred unless the patient is too weak for such a procedure. This should consist of the extensive local removal of the growth entirely with the cautery, associated with the complete lymphatic dissection of inguinal and femoral glands devised by Basset. The special feature of this lymphatic dissection consists of the incision of Poupart's ligament to get at the important glands situated deeply directly around the femoral vessels.

CONCLUSIONS

To summarize: The cessation of ovarian secretion, either by castration or at the menopause, leads to profound atrophic changes in the vulvar skin which, under special conditions, predispose to carcinoma. In all instances there is a general atrophy which varies greatly

in intensity, at times resulting in a complete obliteration of the genital folds. In married persons such extreme atrophy through sexual traumatism may lead to a mild chronic vulvitis with sclerosis of tissues, termed kraurosis vulvae. At times such extremely atrophic vulvae have superimposed a peculiar elastic tissue atrophy, which produces pruritus and a parchment-like inflammation known as leukoplakic vulvitis.

Finally, we have in the typical cancer following leukoplakic vulvitis a combination of three factors: cessation of ovarian function, disappearance of elastic tissue from the underlying dermis, and chronic inflammation. These are with reasonable certainty of special significance in the etiology of the malignant degeneration. Which factor, or which combination of them, plays the most important part is a matter for future investigation.

HYDRARGISM FROM THE APPLICATION OF A WEAK AMMONIATED MERCURY OINTMENT IN THE TREATMENT OF PSORIASIS

PAUL E. BECHET, M.D.
NEW YORK

Mercurialism following the application of an ointment containing a small amount of ammoniated mercury seems to be very rare. A review of the abstract department of the JOURNAL OF CUTANEOUS DISEASES, now the ARCHIVES OF DERMATOLOGY AND SYPHILOLOGY, from 1911 to date, failed to bring a single case to light. The author, with a large dispensary dermatologic practice extending over a period of ten years, has never encountered a case, in spite of the fact that ammoniated mercury ointment is the "pièce de résistance" of our dispensary formularies, and in use all of the time; in fact, its only worthy rival is the calamine and zinc lotion so well known by those of us who worship at the dermatologic shrine. This case, therefore, seems to be of sufficient interest to warrant a brief report.

REPORT OF CASE

History.—W. H. S., a man aged 45, a native of New York state, stated that he had been suffering from psoriasis for twenty months. It began on the scalp, and within a few months appeared on the legs and knees. In August, 1918, while in California, the eruption disappeared entirely. It recurred again on his return to New York a few months later. The recurrence was most severe, the eruption spreading gradually over the entire body. He was first seen, Sept. 29, 1919. His family and personal history were negative. He had never had a severe illness, and except for the worry and nervousness over his condition, he seemed to be perfectly well.

Physical Examination.—This was negative. The psoriasis was of a severe type almost universal on the arms and legs. There were large scaly plaques on the trunk varying from 4 to 12 inches or more in diameter. Some of the scales were as large as a silver dollar. There was also much branny desquamation. The eruption was extremely red and angry in appearance. Like all psoriatics, he had made the usual round of medical men.

Treatment and Course.—He complained of severe itching, and was given the following salve:

℞	Phenol	gr. xx
	Menthol	gr. xx
	Powdered salicylic acid	gr. xl
	Ointment of ammoniated mercury	ʒ i
	Ointment of rosewater, ad	ʒ iv
M.		

This was a 2.5 per cent ammoniated mercury ointment. When seen three days later, the itching had diminished but the condition of the eruption was about

the same. In the meantime, he had used 12 ounces of the salve without any mercurialism whatever. He complained that the menthol was too refrigerant. A new prescription was given containing a smaller quantity of menthol and ammoniated mercury:

℞	Phenol	gr. xx
	Menthol	gr. x
	Powdered salicylic acid	gr. xx
	Ointment of ammoniated mercury	ʒ iv
	Zinc oleate	ʒ ii
	Ointment of rosewater...ad	℥ iv
M.		

This gave him 1 dram of the ointment of ammoniated mercury to 1 ounce of salve, which would be approximately 1.25 per cent. ammoniated mercury. Four days later he returned to the office complaining of slight trouble with his gums; he said that he occasionally had trouble with his mouth. On examination nothing could be seen. In view of the small quantity of ammoniated mercury used, and the negative appearance of the mouth, the diagnosis of mercurial ptyalism did not enter the author's mind. He was given a mixture of myrrh, sodium borate, and glycerin for his mouth, and told to continue using the ointment. There was so much eruption at the hair margins, that the following ointment for use on the scalp only was given:

℞	Phenol	gr. v
	Ointment of ammoniated mercury	ʒ iv
	Zinc oleate	ʒ ss
	Bismuth subnitrate	ʒ ss
	Ointment of rosewater	℥ i
M.		

He then disappeared from observation until Feb. 11, 1920, an interval of four months. The patient was highly intelligent and his statements could be thoroughly relied on. He stated that about a week after his last visit, he became severely salivated, all of his teeth were loose, he lost one permanently, the gums were spongy, bleeding and fetid. There were aphthous sores on the mucous membrane of the mouth. Liquid nourishment only could be taken, with consequent loss of much weight. He claimed that it was several months before he became well again. The psoriasis had disappeared entirely, and he ascribed this good result to the care of his family physician.

COMMENT

Chamot states that it takes from 30 to 40 grains of ammoniated mercury taken internally to produce dangerous symptoms. Yet the case under consideration presented severe symptoms of hydrargism from the application of an ointment containing approximately 6 grains to the ounce, and applied twice daily, using about 2 ounces a day. It seems almost impossible that such a small quantity of mercury should have caused such an excessive ptyalism, yet the facts conclusively prove the opposite.

XI.—"SPIROCHETES" DERIVED FROM RED BLOOD CORPUSCLES *

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In studying experimental syphilis in the rabbit, it has been noted on some occasions that testicular fluid obtained by puncture showed in the darkfield numbers of extremely tenuous, filamentous forms. These flexible bodies in some degree simulated *Spirochaeta pallida* in motility and spiral structure, and yet were clearly not the specific organism. The problem was not so much that of explaining any possible relationship that these forms might bear to the spirochete as to throw light on their origin. The easiest interpretation — only too readily invoked in the field of bacteriology, unfortunately — would have been that of ascribing to these forms a stage in the so-called life cycle of *Spirochaeta pallida*. It is not the purpose of this brief paper to enter into a discussion of the work that has been published recently in this connection by British and American writers. It is merely in the spirit of a suggestion that I wish to mention my observations. They may serve as a control experiment which may have been overlooked in the natural zeal for the discovery of something that must be startling because of its appeal to the imagination. There may well be different stages in the life-cycle of *Spirochaeta pallida*, yet until studies along these lines are made scientific and convincing, we must view with scepticism any theories that explain negative darkfield findings by assuming transmutations or the union of male and female spirochetes to form intermediate elements, and the like.

The observations with which this paper will deal are undoubtedly well known to the physiologist. Their application, however, to darkfield study of *Spirochaeta pallida* has not been shown, and no attempt has been made to explain certain findings in the testicles of rabbits — findings that have led some workers to suggest these appearances as phases of the life-cycle of the organism causing syphilis. A search of the literature has disclosed remarkably few citations (two, in fact) of a point that becomes clear and simple when interpreted in the light of what one observes in the course of numerous darkfield examinations

* Work done under a grant from the Interdepartmental Social Hygiene Board.

* Studies, reports and observations from the dermatological departments of The Barnard Free Skin and Cancer Hospital and the School of Medicine, Washington University, St. Louis, Mo., U. S. A., service of Drs. M. F. Engman and Wm. H. Mook.

of material taken from normal testes as well as from those having syphilitic orchitis. In a particular instance worthy of mention, Graetz [1] observed in a specimen of bloody testicular fluid, tenuous flexible bodies which were for the most part attached to red blood corpuscles. A few weeks after the initial puncture of the rabbit testis, characteristic *Spirochaeta pallida* could be demonstrated in the darkfield. This is mentioned also by Mühlens in the "Handbuch der pathogenen Protozoen (v. Prowazek)." No explanation is given for the interesting observation, but it is suggested that the possibility of a stage in the development of *Spirochaeta pallida* cannot be disregarded.

At the very outset, it was apparent that the irregularity with which it was possible to demonstrate these puzzling "spirochetes" from the same rabbit testicle, was possibly due to some fortuitous factor. Indeed, this supposition became more reasonable when it was observed that specimens which were tinged with blood invariably contained the spirochete-like forms. Even in those instances in which a few red blood corpuscles were present in the darkfield, the same bodies were found. A careful study of individual blood cells in the field soon offered convincing proof that these were the source. Within a few minutes after preparing the darkfield specimen, slightly crenated red cells were soon to give off minute protuberances resembling buds which grew longer until the periphery of the cell assumed the appearance of a ciliated structure. As the length of these filaments increased, lashing and undulation progressed vigorously. The corpuscle in the meantime lost its original contour with a corresponding increase of opacity at the center, until the gelatinous threads, having attained a length of two and three times that of the diameter of the cell itself, broke away into the stream. Every field showed great numbers of actively moving "spirochetes" that developed in the manner described (Fig. 1). This phenomenon must be attributed to the extreme susceptibility of red blood corpuscles to environmental influences, as a few simple experiments devised with this in view have shown.

That a very delicate physiologic balance must be maintained in order to preserve the normal structure of red blood cells is a fact. Osmotic pressure, surface tension and complex physicochemical factors may be disturbed readily in any specimen of diluted blood. Changes observed in the darkfield are manifestations of these extraneous influences. The transformation of red blood cells has been observed repeatedly by the writer even in many specimens of spinal fluid which were found to contain some corpuscles. When freshly obtained, normal cells were added to a specimen of spinal fluid, the same changes occurred.

1 Graetz, F.: Dermat. Wchnschr. **58**:281, 1914.

ACTION OF NEUTRAL HYPERTONIC SALT SOLUTION ON RED BLOOD CORPUSCLES

Salt solutions, prepared with varying concentrations of sodium chlorid ranging from 1.0 to 1.5 per cent. and having a p_H value of 7.0 were used as a menstruum for defibrinated blood obtained from normal rabbits. Darkfield specimens were set up with each kind of salt solution, and the red cells studied for one half hour. The changes were most rapid and most marked in the 1.5 per cent. salt solution. Within five minutes, the cells assumed a "medusa-head" appearance; and great numbers of detached, flexible, spirochete-like bodies could be found in every microscopic field. The phenomenon was correspondingly less striking in the solution of diminishing salt content. If a blood-tinged specimen of testicular fluid was examined after the addition of a drop of 1.5 per cent. of salt solution, the change in the appearance of the corpuscles was remarkable. The transformation, instead of progressing gradually, became abrupt.

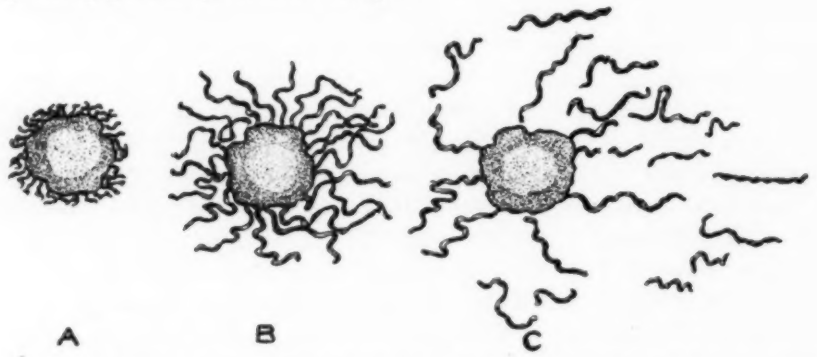

Fig. 1.—Transformation of red blood cells (diagrammatic). (a) First stage showing short processes at periphery of corpuscle; (b) later stage showing filamentous processes increased in size; (c) final stage, showing manner in which "spirochetes" break away from cell.

EFFECT OF NEUTRAL HYPOTONIC SALT SOLUTION

With neutral salt solution (p_H 7.0), varying from 0.75 to 0.6 per cent., similar changes were noted. The most rapid and complete transformation into "spirochetes" took place in the 0.6 per cent. solution; in 0.7 per cent. saline after three to five minutes, and in 0.75 per cent., after prolonged contact ranging from twenty to forty-five minutes.

EFFECT OF PHYSIOLOGIC SALT SOLUTION WITH VARYING H-ION CONTENT

Several series were set up with physiologic salt solution prepared with H-ion concentrations of 6.4, 6.8, 7.0, 7.4, 7.8 and 8.4. In all of these solutions the same rapid change of red cells was seen. It was

surprising that a neutral, physiologic suspension did not hinder the formation of the curious filamentous bodies that have been described above. It suffices, therefore, merely to remove red blood corpuscles from their natural surroundings in order to observe these interesting changes.

In all cases, regardless of the surrounding medium, it was found that if a minute trace of highly diluted acetic acid was touched to the cover slip while observing the specimen in the darkfield, the actively lashing bodies would disappear completely from around every blood cell and from the field in general.

DISCUSSION AND SUMMARY

The simple experiments that have been described, need no exhaustive comment. It is obvious that the search for typical *Spirochaeta pallida* may be made less difficult if light be thrown on confusing artifacts which, as in this instance, have been interpreted by some in an entirely erroneous manner.

It has been shown that spirochete-like bodies are derived from red blood corpuscles. These bodies bear no relationship whatever to the organism of syphilis and may be produced at will. Influences, such as H-ion content of solutions, tonicity and transfer from the usual environment are sufficient for the demonstration of the phenomenon. These nonspecific and inanimate bodies may be seen in specimens of fluid that are apparently free from blood. However, a very careful search of numerous fields will reveal the presence of at least one red blood cell which is all that is necessary for the transformation process. The failure to find red cells in a specimen of testicular fluid is not invalidating proof of the contention that the "spirochetes" are thus derived. Both normal as well as spirochete-infected testicles show these bodies, but their presence has nothing whatever to do with the life-cycle of the specific agent in syphilis. They are merely derivatives of red blood corpuscles.

THE ETIOLOGY OF ECZEMA*

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THREE THEORIES CONCERNING ETIOLOGY OF ECZEMA

The history of the early views held concerning the etiology of eczema has been well given by both Brocq [1] and Besnier.[2] These views, as well as those of more recent times, are admirably summarized in an excellent article by Highman.[3] The opinions of various men and of various schools are widely diverse and are often painful to the logical mind. In general, it may be said that there are three theories: First, that the disease is due to external irritation or infection (Unna); second, that there is some mysterious internal factor at work, and that the skin reaction is due almost exclusively to this; and third, that there is an interaction between internal and external causes, both being necessary to produce the eruption.

It is now generally recognized that external irritation may cause a cutaneous condition that is indistinguishable from eczema (Knowles,[4] Highman), and many physicians believe that this factor plays a great part in the production of lesions usually known by the name of eczema; in other words, a dermatitis venenata is really one form of eczema.

The theory that a staphylococcus was responsible, once so fervidly championed by Unna,[5] has been abandoned, thanks partly to the work of Pertini,[6] Török,[7] Cole [8] and others, whose views are set forth in Highman's article. At the same time it is well recognized that certain infections of the skin, notably those caused by an epidermophyton, produce skin lesions which are indistinguishable from eczema, and that at times so-called eczematous processes may be complicated by secondary infection.

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* Read before the meeting of the American Dermatological Association, held at Atlantic City, June, 1919.

1. Brocq: Annal. d. dermat. et de syph., Jan. to March., 1900.
2. Besnier: Prat. Dermat. **2**:1.
3. Highman: Jour. Cutan. Dis. **34**:259, 1916.
4. Knowles: Jour. Cutan. Dis. **31**:11, 1913.
5. Unna: Trans. Fourth Internat. Cong. Dermat., Paris, 1900, p. 9.
6. Pertini: Trans. Fourth Internat. Cong. Dermat., Paris, 1900, p. 63.
7. Török: Annal. de dermat. et de syph. **139**: 1900.
8. Cole: Arch. f. Dermat. u. Syph. **116**:207, 1913.

In regard to the supposed internal factors that may cause an eruption resembling eczema, we have many speculations but few facts. As Johnston's [9] paper shows, there is absolutely no proof that any error of metabolism is responsible. Recently there has been a tendency to blame protein sensitization and this has taken two forms: First, focal infection has been held responsible, and many a tooth, whose roentgen-ray picture showed a translucent area near the root, has been extracted, and in 99 per cent. of the cases the skin condition has merrily gone on unchanged. It must be recognized that focal infections can do much harm to the system, but there has been entirely too great a tendency on the part of some dermatologists to make these infections the cause of every condition from falling hair to a plantar dermatosis, and it is time to employ sanity in the interpretation of our evidence. Second, sensitization to some food protein is even now on the high road to popularity and for the next few years we shall doubtless have an exhibition of thousands of cases diagnosed by some food test, usually of the cutaneous type, and cured by either immunization with minute doses of food or by abstinence from it altogether. While we must remember that cutaneous tests may be important, let us not assume that such tests can take the place of all other diagnostic methods. Remember luetin!

Likewise various nervous influences have been mentioned as possible etiologic factors, apparently usually by those who do not know an axon from a dendrite and who have never heard of the vegetative nervous system. At the present time a few men are trying to show that on physiologic and clinical grounds there is good reason to believe that the vegetative nervous system through the action of the vagus nerve may cause a skin irritation, but most of the older writers mentioned nervous influence as a convenient way of dodging an issue. Reede's [10] paper should be read by any one who is interested in the subject.

Highman enumerates several other theories of internal causation and the interested reader is referred to his paper.

There is a strong school composed of some of our best men (Neisser,[11] Tilbury Fox,[12] Fordyce,[13] Jacquet and Jourdanet,[14] and Hall [15]) which believes since internal causes alone can but rarely cause eczema and since external irritants, using the term in its broad sense,

9. Johnston: Jour. Cutan. Dis. **31**:3, 1913.
10. Reede: Jour. Cutan. Dis. **36**:505, 1918.
11. Neisser: Deutsch. dermat. Gesell., Discussion, 1892.
13. Fordyce: J. A. M. A. June, 1903, 2.
12. Tilbury Fox: Skin Diseases, 1873.
14. Jacquet and Jourdanet: Annal. de dermat. et de syph. 11, 1911.
15. Hall: Brit. Jour. Dermat. **17**:161, 203, 247, 287, 1905.

do not produce the same results on every skin, there must be an interaction of internal and external factors. It must be admitted that external irritation does not affect every skin in the same way, but for this there may be a number of purely local reasons. The irritant may be more intense or remain longer in contact. Certain factors in the skin itself may be responsible. For instance, there may be more perspiration that can at times act as a solvent; the pores or sebaceous openings may be more patent; there may be less protective oil; the horny layer may be thinner; deficient circulation may be responsible; the skin may be dry and minutely cracked. In other words, purely local conditions will probably explain many of the facts alleged to demand an internal causation. At this point it should be mentioned that practically every writer on the subject of eczema has recognized the importance of local predisposing causes.

CONDITIONS DIAGNOSED AS ECZEMA SEPARATE DISEASE ENTITIES

One of the most important facts concerning the etiology of so-called eczema is that of recent years a larger number of conditions, previously diagnosed as eczema, have been shown to be separate disease entities. One of the first to go was seborrheic dermatitis. Then it was appreciated that dermatitis venenata was another, although the importance of this great subtraction has not as yet been properly felt. Engman [16] and others [17] have separated infectious eczematoid dermatitis as due to a staphylococcus infection. Eczema back of the ear is now generally believed to be an impetigo. Sabauraud,[18] Whitfield,[19] Ormsby and Mitchell,[20] and others [21] have shown that the so-called eczema of the palms and soles is frequently due to an epidermophyton infection. Other writers have striven to separate lichenification, neurodermatitis and a chronic papular dermatitis of the axillae and groins, although it must be admitted, as the paper by Dr. Wise [22] well shows, that much confusion still exists regarding these conditions. The lichenification of Vidal (lichen simplex chronicus) has definite characteristics; it is preceded by itching and does not become vesicular, and is the result of irritation and not necessarily the result of a so-called eczema; in the future it will be classed as a disease entity.

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16. Engman: Amer. Med. **4**:20, 1902.
17. Fordyce: Jour. Cutan. Dis. **29**:129, 1911.
18. Sabauraud: Annal. de dermat. et de syph. **1**:289, 1910.
19. Whitfield: Brit. Jour. Dermat. **23**:35, 1911.
20. Ormsby and Mitchell: J. A. M. A. **67**:711 (Sept. 2) 1916.
21. Hartzell: Am. J. Med. Sc. **149**:96, 1915.
22. Wise: Jour. Cutan. Dis. **37**:590, 1919.

Pathologically we have no charactetristics that serve to distinguish eczema as an entity (Highman [3]), nor does the clinical course of the disease or its response to therapeutic measures serve as a guide.

We cannot but conclude that today eczema is in the position that rheumatism was a few decades ago and that eczema as an entity will meet the same fate that while we shall recognize a clinical picture that is similar we shall also recognize many causes that are responsible, and that we shall make it our business to search for these causes. Even today the expression "eczema" is most undesirable for at least two reasons: First, patients have a belief that eczema is incurable and are afraid of it; second, students diagnose a condition as eczema and take much joy in their cleverness; they pay no attention whatever to causation, thus precluding themselves from the class of good therapeutists. The recognition of the cause of any case diagnosed as eczema is of the greatest importance, for we can then effect a cure and prevent a return of the trouble.

STUDY OF 195 CASES OF ECZEMA

In the following study of 195 cases the method of selection employed was: First, private patients with intelligence enough to aid in the work were chosen; and second, they were kept under observation long enough to permit a thorough study. The methods of study utilized were:

1. The history of all patients was carefully taken. A special effort was made to find external irritating factors, and in many instances a visit to the home or place of employment was made. Inquiries were made as to the use of soap and water, the effect of the use of a scrub brush or of sand for cleansing purposes; the effect of cold and windy weather, or of hot weather and excessive perspiration; the wearing of wool or fur next the skin, or the use of wool blankets at night; the use either accidentally or intentionally of various chemical substances, such as hair tonics, face creams or of various irritating substances used in the arts, trades or professions; the care of flowers, especially of the primrose—and many similar queries.

2. A search for epidermophyton was made in all suspicious looking lesions on the hands, feet and crural region. The results of one search were never considered as conclusive evidence.

3. In a few instances in which bacterial infection was suspected, especially in lesions spreading from the anal region, a bacterial study was made and autoinoculation experiments made on the patient.

4. All doubtful cases were thoroughly studied by a competent internist, not a general practitioner, one well versed in the physiology of the vegetative nervous system.

5. All children were studied by a competent pediatrician.

6. Roentgenograms were taken of the teeth of practically all of the doubtful, and of many of the other patients, and in more than one instance teeth showing root abscesses were extracted.

7. In two or three instances in which there was a history of intestinal trouble roentgen-ray studies were made of the digestive organs.

8. Cutaneous food tests were applied to all doubtful cases.

A total of 195 patients were examined. In many instances the cause of the disease was easily determined, but in several instances it appeared probable that there was more than one cause, and in a number of cases the results were so baffling that we hesitate even to make a suggestion as to the cause.

The following table shows the results:

CAUSE OF ECZEMA IN PATIENTS EXAMINED

	No. of Cases
Local Irritation:	
Soap and water	36
Weather	6
Occupation or chemicals	30
Clothing	18
Plants	6
Total	96
Local Infection:	
Bacterial	4
Epidermophyton	2
Total	6
Local Predisposing Causes:	
Excessive sweating	16
Frostbite	1
Varicosities	5
Xeroderma	3
Total	25
Internal Causes:	
Disturbed vegetative. nervous system	14
Disturbed food assimilation, eczema of children	12
Urticaria	7
Total	33
Combined causes	9
Undetermined Causes	26

The lesions due to external irritants are so well known that it is hardly necessary to describe them. They usually occur on exposed surfaces or on surfaces subject to irritation. In size the lesions are not necessarily confined to the site irritated for they may be spread over a considerable area, at times even spreading to other portions of the body, possibly as an anaphylactic response. Various degrees of lesions are found, ranging from a simple erythema to a deep vesiculation, according to the amount of irritation.

Regarding staphylococci as a possible cause of so-called eczema, the following experience is illuminating:

In one family four members were suffering from different types of classic eczema. While looking over the situation it was noted that the pet dog also had an eruption. Inquiry elicited the fact that the dermatitis in the patient had invariably started on those portions of the body that came in contact with the dog. For instance, in the man of the house the eruption first appeared on the ankle, which the dog rubbed against, and in the mother on the neck, the dog frequently cuddling against that place while the woman lay on the bed. A *Staphylococcus aureus* from all of the patients and from the dog was grown in pure culture and on autoinoculation it produced lesions similar to those in the patient

Ormsby and Mitchell, as well as other dermatologists, have shown how frequently epidermophyton infections may be mistaken for eczema. In two of my cases the organisms could not be found until a number of weeks had elapsed, although they were carefully searched for, hence they are included in this list. However, in view of a marked tendency to blame many conditions on organisms associated with the ringworm parasites, it is pertinent to wonder whether in certain instances these organisms may not be secondary invaders rather than the producers of the dermatologic condition.

Dermatitis in the groins and axillae is frequently due to excessive sweating and at times to friction either of the opposing skin surface or of clothing. It is questionable whether the cases due to sweating should be classified under the heading of local irritation or local predisposing causes.

The forms of dermatitis associated with varicose veins or with an unusually dry skin call for no comment, as they are well known.

The group of cases associated with disturbances of the vegetative nervous system, and clinically usually showing signs of a vagotonia, are a distinct clinical entity. As is becoming more generally recognized, the vegetative nervous system is composed of two portions, the vagus and sympathetic systems. These two sets of nerves regulate the functions of the viscera and the skin. As the impulses sent out over these two sets of nerves produce diametrically opposite results in the organs which they supply, it is obvious that some kind of balance must be maintained or one set would gain the upper hand. This happens in many instances; when the vagus impulses predominate the patient is spoken of as a vagotonic, and when the impulses through the sympathetic impulses predominate, he is spoken of as a sympathocotonic. Among the common symptoms shown by the former are: slow heart action, often irregular; bronchial asthma; acute attacks of rhinitis with a profuse discharge lasting only a day or so; pyloric stenosis; spasm of the colon and sudden attacks of urticaria or of an

acute dermatitis resembling eczema. The sympathocotonic would naturally show an opposite set of symptoms.

In dermatitis associated with disturbances of the vegetative nervous system the lesions usually begin on the flexures of the elbows and knees and frequently on the sides of the neck, radiating from the sternoclavicular articulation up under the ear. Larger surfaces may be involved secondarily. The axillae or groins may be invaded at the time of the initial attack, but this is rather unusual. The lesions may be erythematous, but are more frequently distinctly papular; they may also become vesicular, and if there is much itching, as there often is, there is considerable weeping as the result of the irritation produced by scratching. These lesions are spoken of under a large variety of names, such as neurodermatitis and other names collected by Wise.

Disturbances of the vegetative nervous system may be due to first, a protein hypersusceptibility, either to a food or to bacteria (focal infection); second, possibly to mechanical irritation, such as teething; and third, to psychic irritation.

As an interesting example of a case resulting from the first cause, the following case may be quoted:

> The patient was an apparently healthy boy aged 9. Three or four times a year he had attacks of bronchial asthma, at times associated with pyloric stenosis and always with a violent "eczema," usually most marked on the flexures of the arms and leg, in the inguinal area and on the neck. His mother had noticed that whenever he drove behind a horse and whenever he ate chicken or veal such an attack would almost invariably follow. The cutaneous food tests gave marked reactions to horse dander and to the two articles of food.

As an example of the psychic cause, the following instance is noteworthy:

> A strong, apparently healthy, boy, 8 years old, occasionally suffered from "sick headaches," from bronchial asthma and from an "eczema," more severe in the flexures of the knees and elbows, but at times affecting most of the trunk. Two other children gave a history of more or less frequent attacks of bronchial asthma associated with urticaria. The mother was suffering from what had been diagnosed as an exophthalmic goiter and the father was a high strung, hard working, scientific man. The patient had been perfectly well for about a year, when one day a neighbor's boy set a dog on him; his father came along and scolded him for being frightened; within half an hour he had pyloric stenosis, bronchial asthma and a violent attack of dermatitis. The two former conditions were easily controlled by atropin but the latter was more persistent and yielded only to the roentgen ray. On carefully questioning both the boy and his mother it became evident that the attacks had always followed scoldings by the father when the youngster felt himself not to blame. This was made clear to the parents and for over a year no member of the family has had a recurrence of the conditions.

Naturally the treatment of these cases depends on the cause, and at times psychanalysis is necessary, provided it be made by a com-

petent man. Atropin will sometimes relieve the condition, and the roentgen ray is valuable in bringing about resolution, although at times it is a complete failure.

Infantile eczema is generally due to disturbances in food assimilation, the carbohydrates and fats usually being held responsible. It is possible, however, that there may be other varieties of "eczema" in children and it is necessary to be watchful. I recall one case in which a widespread dermatitis was traced to the careless rinsing of clothes, which were washed by a careless maid, a strong cleansing powder being used.

Cases that began with an urticaria were particularly interesting, especially as I was able to study all of them from the beginning. It is not generally recognized that a so-called eczema may originate from an urticaria, and few authorities even mention the coexistence of the two conditions. The patient first notes a more or less general itching; within twenty-four hours a papular eruption appears, localized to a small part of the body, usually the trunk or limbs, either extensor or flexor surface, which rapidly spreads until a considerable surface is involved. The papules may coalesce or more rarely become vesicles. The itching is usually intense. These patients usually recover speedily after the intestinal tract is thoroughly cleaned out, and after the application of soothing lotions.

The cases that I have classed as combined are those in which there was apparently an area of external irritation and also some more or less definite internal cause. Several of them apparently belonged to the group of disturbed vegetative nervous system cases, but no other signs of such trouble could be found; however, the distribution of the disease was most suggestive.

In twenty-six cases I was unable to determine the cause, although in several instances I suspected it. In two cases I am inclined to believe that a dilated colon was responsible, and one patient recovered after two abscessed teeth were extracted. This, by the way, was the only one of my cases in which the extraction of a tooth affected the course of the disease. In two other cases I felt that infection around the teeth might be responsible for the condition, but as we could not get rid of the infection this could not be proved. In another instance it is possible that a slight glycosuria was the cause of the trouble.

CONCLUSIONS

1. Eczema while giving a definite clinical picture is in reality due to the following causes: external irritation, external infection, local predisposition of the tissues, disturbances of the vegetative nervous system, disturbed food assimilation and urticaria, the latter probably being due to a protein hypersusceptibility.

2. The day will come when the word "eczema" will no longer be used, just as the word "rheumatism" is now passing from usage. There is no more relationship between a dermatitis due to external irritation and due to vagotonia than there is between a gonorrheal arthritis and a syphilitic one.

3. As clinical entities now well established the following may be suggested: dermatitis due to external irritation; vagotonic dermatitis; urticarial dermatitis and dermatitis due to disturbed food assimilation (the eczema of young children). None of these conditions should be classified as eczema, as this only results in confusion and a failure to discover the cause.

XII.—SKIN REACTIONS TO APOTHESIN AND QUININ IN SUSCEPTIBLE PERSONS*

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Idiosyncrasy of certain persons to drugs, causing various skin rashes, is of common occurrence, but the proof that an eruption is due to the ingestion of a drug is generally lacking. In many cases of repeated rashes invariably following the ingestion of a drug, such as quinin or balsam of copaiba, the cause and effect are so obvious that further proof is seldom sought and generally is not necessary.

The field covered by skin manifestations of untoward action of chemicals, toxins of various kinds and foreign proteins, whether applied externally, taken through the alimentary canal or injected into tissues or directly into the blood stream, is enormous, and with the introduction of new drugs is of unlimited possibilities.

Idiosyncrasy to drugs may be described as the unusual reactions of certain persons to drugs, whether applied externally, taken into the stomach, or injected into tissues or the blood stream; it may be mild, severe, or even fatal, and manifested by skin eruptions or various systemic disturbances, the degree probably represented by the individual susceptibility.

Drugs are administered or applied up to their physiologic effect, and when given or applied in doses over the known physiologic amount, reaction, local or systemic, results. When a severe systemic reaction or a skin rash develops following local or internal use of a drug in average doses the person is known to be susceptible to the drug or to possess an idiosyncrasy to it.

The explanation of the phenomenon is unknown and requires further researches in physiologic chemistry. The chemical or foreign substance used probably unites with an unusual systemic chemical, peculiar to the person and produces a new product, or toxin, generally more or less harmful, and is nature's warning to desist from the application or administration of the given remedy. The reaction may be anaphylactic. The time and degree of reaction vary considerably, and both are factors determining the toxicity in a given case.

Iodoform applied locally producing a vesicular dermatitis, mild phenol packs on infections producing gangrene, mild mercuric chlorid

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*Studies, reports and observations from the Dermatological Departments of the Barnard Free Skin and Cancer Hospital and the School of Medicine, Washington University, St. Louis, Mo., U. S. A.; service of Drs. M. F. Engman and W. H. Mook.

solutions as used by surgeons on their hands and forearms producing a subacute dermatitis, wearing of furs producing dermatitis around the neck, and hair dyes producing severe dermatitis of the face, neck and even the trunk, leaving the scalp free of inflammation, and the various trade dermatoses are all well known external irritants in certain persons. Dr. Engman and I have had patients who used the same brand of hair dye for fifteen years without trouble and then suddenly developed a typical hair dye dermatitis.

Of drugs given internally or intravenously the list is practically unlimited. We well remember a baby, 9 months old, who was given 2 grains of potassium bromid three times in one day—6 grains in all—presenting fungoid lesions over the face and entire body, up to the size of a quarter, every one of which left a permanent, disfiguring, hypertrophic scar, the lesions continuing to appear for about six weeks after the one day's ingestion of the drug.

Fig. 1.—Localized dermatitis twenty-four hours after apothesin was applied to forearm.

Arsenic, given internally, generally requires months to produce the typical keratoses indicating its untoward effect. Arsphenamin may provoke a skin eruption after one small dose or many repeated large doses. Quinin and balsam of copaiba are usually rapid in their production of skin manifestations, and their severity or extent may be quite surprising when the amount of the drug taken is ascertained.

Toxic foods and errors of metabolism producing urticarias of various kinds with erythema multiforme, and vesicular and bullous lesions are of course numerous, and in these the etiology is more obscure, but they depend on an unknown toxin which has a peculiar effect on certain persons. Serum eruptions and reactions are frequent, but they occur only in individuals peculiarly susceptible.

The study of dermatoses from external irritants is of vast importance from a trade point of view, for among all workers in factories handling dyes, chemicals and oils—in painters, paper hangers, plasterers, etc.—a few will be found to have, or to develop at a later period, an idiosyncrasy to the particular irritant employed in their work. Sensitization has taken place.

We have had a considerable number of dentists apply for treatment for persistent eczemas of the fingers and hands due to the various chemicals used by their profession. The following case is a typical one caused by apothesin, a new drug used for local anesthesia.

REPORT OF CASES

CASE 1.—*History.*—On June 18, 1919, Dr. X., a dentist, aged 33, applied for relief from a subacute dermatitis of the index, second and third fingers

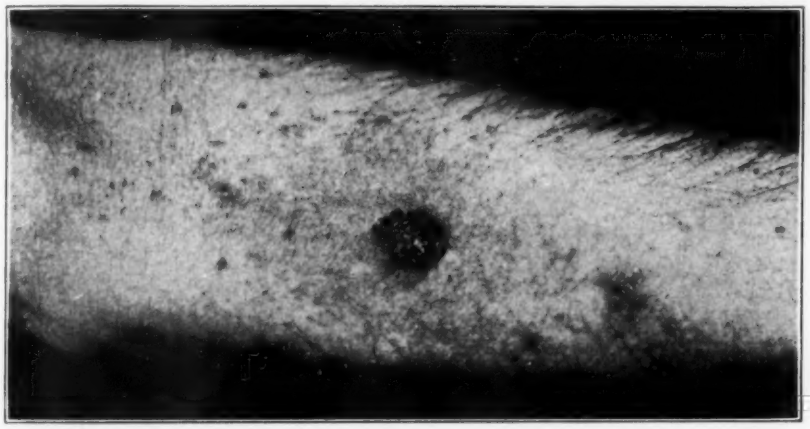

Fig. 2.—Localized dermatitis forty-eight hours after apothesin was applied to forearm.

of his left hand. The eruption on the index and second fingers chiefly involved the palmar surface of the last joints, with a mild inflammation around the entire nail. It was reddened, slightly scaly, crusted, with some oozing of serum, and showed a few small fissures. On the lateral surface of the third finger between the first and second joints was a similar sharply circumscribed patch. No other fingers were involved. The eruption had been present five weeks.

Treatment and Course.—He was immediately informed that his eczema was due to some chemical he was using in his work. Inquiry developed the fact that he was injecting apothesin as a local anesthetic. His method of procedure was to place a tablet in the barrel of the syringe, add water and then hasten solution by knocking the syringe on his third finger. The few drops lost on the fingers in this process were responsible for his eczema. He stopped work entirely and within one month the eczema was entirely well under 1.5 per cent. ichthyol in Lassar's paste.

Experiment.—We prepared a 1 per cent. solution of apothesin and applied it to a small scarification on his right forearm with water controls, such as are applied in food sensitization tests. Within twelve hours a distinct wheal was produced at the site, one-half an inch in diameter, and at the end of forty-eight hours the locally produced dermatitis reached its maximum. It consisted of a localized area of redness with edema, 4 cm. in diameter. The swelling subsided considerably after three days but the area was reddened and there was some crusting and scaling. The area was pruritic and five days later slight edema and inflammation of the eyelids developed, due to scratching and rubbing of the lids. The areas were persistent and required about two weeks to disappear without treatment.

As novocain is said to be a drug similar to apothesin the experiment was repeated after recovery from the apothesin, with a similar clinical result but not quite so marked a reaction.

Fig. 3.—Reaction following application of apothesin (kindness of Dr. J. H. Stokes).

The patient was exhibited before the Chicago Dermatological Society when it was entertained by the St. Louis Society, in November, 1919. Since then, Dr. Stokes of Rochester has sent me the report of a similar case in a dentist in whom eczema was produced by apothesin and the skin test showed an exactly similar clinical reaction.

Case 2.—A medical student at Washington University informed me that he was particularly susceptible to quinin, the smallest amount taken internally producing an erythematous rash over his face and body with uncomfortable systemic disturbance.

Experiment.—March 11, 1919, 2:15 p. m.: Three areas, 1 cm. long and 2 cm. apart were scarified on the flexor surface of the left forearm and on each was placed one drop of a solution of quinin hydrochlorid in physiologic sodium chlorid. The amount of the quinin was exceedingly small, contain-

ing ⅕ grain in 1 c.c. of physiologic sodium chlorid. Within five minutes distinct wheals were seen at each scarified area. At a point just below the bend of the elbow, 2 minims of a similar solution (containing 1/40 grain) were injected intradermally. Fifteen minutes later slight redness at this site was noted. He stated that three hours after the tests were applied all areas had became inflamed and tender. The patient was not seen until 10:50 p. m., or eight hours and thirty-five minutes later, when the reaction was most striking.

The points of scarification and injection were intensely reddened and swollen and there were separate patches of dermatitis in the vicinity. The site of the intradermal injection was particularly inflamed and had developed into an area 6 cm. in diameter. He stated that the entire arm felt sore.

Twenty-four hours later the reaction had greatly subsided. There was still edema with some erythema. The reaction at the site of the injection had reduced to 2 cm. in diameter. The scarified areas were still reddened but no wheals or edema existed.

Case 3.—Another patient, a physician who always develops an erythema multiforme-like eruption over his body two or three days after an injection of arsphenamin, was tested by applying the solution to a small scarification on his forearm with a negative result.

The first two patients demonstrate two types: one known to be susceptible to a drug from external use, and the other from internal administration of a drug, and in both the test served as an easy method of proof of the etiologic factor.

The tests are suggested as an easy means to ascertain causes of certain dermatoses, and when positive should prove invaluable, especially where trade dermatoses are suspected.

TWO UNUSUAL PHASES OF HEPATIC SYPHILIS*

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The gross and microscopic pathologic features of hepatic syphilis are in the light of our present knowledge well recognized and easily determinable. The close resemblance of these pathologic pictures to those of nonsyphilitic origin, particularly in the group of cirrhoses, is reflected in the clinical aspects of liver disease. Syphilis, the great imitator, is perhaps never seen in a more advantageous rôle as such than in hepatic disease.

The incidence of liver syphilis is second only in frequency to that of syphilis of the heart. McCrae is authority for the statement that syphilis of the liver occurring late is as frequent as late involvement of the nervous system. Considering that a fairly advanced degree of cirrhosis or cicatrization may be present without giving rise to clinical symptoms, and that such involvement is not frequently an accidental postmortem finding, it is evident that the incidence of hepatic syphilis is higher than would be indicated by figures drawn from clinical experience. The special predilection for spirochetal invasion in the substance of the liver is held by some as accountable for the great frequency of involvement of this organ. However this may be, liver syphilis is a predominating clinical and pathologic finding in both the inherited and acquired forms of the disease.

The whole subject of liver syphilis covers far too large a field to be covered by me in the time allotted, and such a review is moreover apart from the purpose of this paper. I should like to emphasize merely two phases of liver syphilis: The first — "icterus gravis syphiliticus," also known as "icterus syphiliticus praecox," merits description by reason of the fact that it is hardly mentioned in American literature. The second, syphilitic cirrhosis, deserves a detailed description by reason of the apparent lack of correlation of its pathologic and clinical features and because of peculiar therapeutic considerations bearing on it.

ICTERUS GRAVIS SYPHILITICUS — "ICTERUS SYPHILITICUS PRAECOX"

Jaundice, occurring as a rare complication at the outset or in the early secondary period of syphilis, was recognized as early as 1585 by Paracelsus. It is also mentioned by Portal, Monti, Botallus, Fallopius and other writers of the latter part of the sixteenth century, in accord-

* Read at a stated meeting of the Chicago Medical Society, March 18, 1920.

ance with the early belief that the liver was the site of election for venereal disease. At a much later date Ricord described icterus in two cases of early syphilis, and ventured the statement that the syphilis was the cause of the jaundice. Gubler, in 1853, substantiated the observation of Ricord, adding seven cases which, by clinical observation at least, were those of true syphilitic jaundice. Still later Lancereaux was able to collect twenty cases of true syphilitic icterus.

Jaundice in early syphilis is now recognized as occurring in two forms — mild jaundice and severe jaundice or icterus gravis. I shall pass over the subject of mild jaundice, as it has no further place in this essay. Suffice it to say in passing, that it differs in no way symptomatically from the simple catarrhal jaundice, and that its incidence in early syphilis is recorded in about five-tenths of one per cent. of all cases. This mild form has been shown to have a varied pathology. The jaundice may actually be obstructive from the pressure of lymph glands on the common duct, as recorded by Engel-Reimer. In other cases, on the other hand, it has been shown to be due to a more diffuse inflammatory reaction of the biliary ducts and portal lymph vessels. Mauriac reported an active inflammation of the liver with hyperemia and stopping up of the biliary ducts.

With the grave form, or syphilitic gravis icterus, we are dealing with a parenchymatous hepatitis, and as it occasionally supervenes on a milder form it is not unlikely that some cases of the mild icterus, at least those in which we are dealing with a mild hepatitis, differ only from the grave form in degree.

Of far greater importance than mild icterus is the graver form. Occasionally supervening on the former, it may often arise with a stormy onset and a rapid course. The tendency, if unrecognized and untreated, is for the condition to go on clinically and pathologically to acute yellow atrophy.

In 1854 Lebert, from a collection of seventy-two cases of acute yellow atrophy, recorded seven as associated with early syphilis. Tierfelder found that eight out of eighty-one cases of acute yellow atrophy occurred in old or recent syphilitic patients. Recognition of the syphilitic nature of certain cases of acute yellow atrophy is found in Osler's Modern Medicine in which it is stated that 10 per cent. of all cases occur during early syphilitic diseases.

Up to 1898, thirty-nine cases of icterus syphiliticus gravis had been garnered from the literature by Richter, with an addition of two cases in his own experience. This number was increased to fifty as collected by Umber in 1911. In 1894 the condition was well recognized by Lasch and described by him under the name of icterus syphiliticus praecox. Many cases were subsequently reported under this title.

From all recorded cases the condition seems to be much more common in women than in men, the ratio being about five to one. For the most part the icterus occurs coincident with the exanthem. It may, however, precede this. In practically all cases the condition occurs during the first year of the infection.

Cause of Icterus Gravis. — The cause of icterus gravis has been carefully studied by Buschke and Zernick in 1911, who concluded that it is due to a syphilotoxic parenchymatous hepatitis, a jaundice of the nonobstructive type. This view was earlier advanced by Buraczinski and Vespremi and Kanitz, and is generally accepted today as the correct explanation of the pathology of the disease. Such incidental factors as pregnancy, abortion, gonorrhea and sepsis may play a minor rôle. In none of the recorded cases was previous liver disease present or demonstrable. The administration of mercury does not play a part in the causation of the condition.

Symptomatology.—The symptomatology of icterus gravis syphiliticus is that of acute yellow atrophy, differing only from other cases in that it yields to specific treatment when recognized early. The onset is variable, generally insidious. A mild icterus usually appears as the first objective sign, accompanied by malaise, vomiting and constipation, but usually without marked gastro-intestinal symptoms. There may be a slight rise in temperature, although it often becomes subnormal. The pulse is usually accelerated. Lumbago and muscular pain are common and there may be severe abdominal cramps. Often debility and a toxic condition similar to that seen in typhoid fever are present. Cases with ascites are reported. While not a uniform finding, hemorrhagic symptoms are reported by many authors. These are manifested by gingivitis, purpura, bloody vomitus, melena and occasionally hemoptysis, hematuria and metrorrhagia.

The second stage of the disease is far more definite. In onset it is marked by a change for the worse in the general condition, by rapid decrease in the size of the previously enlarged liver, the appearance of maniacal symptoms associated with intense headache, disturbance of vision and the occurrence of leucin and tyrosin in the urine. Pupillary disturbances and amblyopia are common. Marked psychic depression, restlessness with insomnia, convulsions and delirium are among the associated mental factors. Apart from the jaundice the clinical symptoms may often resemble meningitis, and indeed partial paralysis and strabismus have occasionally been noted. Marked dyspnea occurs late. A persisting constipation extends throughout the condition, and such dejecta as occur are extremely offensive. Death usually occurs in coma, with accompanying complete sphincter relaxation.

The urine is diminished in amount and highly colored with bile pigment. There is no glycosuria, but small amounts of albumin and

casts are a frequent finding. Crystals of leucin and tyrosin are invariably present, often in so great an abundance that they spontaneously precipitate. This finding is regarded by Senator, Buschke and Zernik as pathognomonic of liver atrophy. Rolleston, however, does not regard it so. There is no characteristic blood picture.

The liver is enlarged at the onset in all cases. The enlargement is smooth, both lobes being equally involved. Tenderness is recorded in one third of the total number. After a variable period reduction in size comes on suddenly, associated with the severe symptom enumerated above and heralding a rapidly fatal outcome.

Necropsy Findings.—At necropsy the liver presents the typical picture of acute yellow atrophy, often being reduced to one third of normal size and weight. The more slowly progressing cases reveal areas of acute yellow atrophy interspersed among areas of red atrophy, the latter representing early destruction. In some cases the entire liver is not affected, while in others not a single normal cell remains.

Of great interest is the negative finding of spirochetes at necropsy, as recorded by Buraczinski, Vespremi and Kanitz, Fischer and Bendig.

Prognosis.—Unrecognized cases are invariably fatal. The course is somewhat longer than that of acute yellow atrophy from other causes, the average duration of the recorded cases being eighty-four days. Many cases, however, ended fatally in less than two weeks. In one of Bendig's reports a mild icterus with indefinite prodromes extended over three days, followed by a stormy exacerbation and death within twenty-four hours.

The older writers regarded the condition as invariably fatal. Compared with other types of acute yellow atrophy, however, if the syphilitic nature of the case be recognized, the prognosis for the recovery is fair. Isolated cures even in advanced cases are recorded by Duhot and Umber. In Senator, Buschke, Zernik and Lasch's case recovery is recorded even after an appreciable decrease in the size of the liver had taken place, with the findings of leucin and tyrosin in the urine. Purgation with calomel, intensive mercurialization and arsphenamin are indicated by most authorities.

To the cases of recovery after correct diagnosis I may add one observation by myself at the University Hospital in 1916.

In this case, studied by Hewlett and myself in our wards, there occurred in a man of 38, shortly after the appearance of syphilis, the acute onset of a fulminating type of jaundice. The liver was enormously enlarged and excessively tender. The spleen was likewise enlarged and firm. The stools were clay-colored. The urine contained large amounts of albumin, casts and numerous crystals of leucin and tyrosin. The abrupt onset, without gastro-intestinal symptoms, the absence of fever, the enlargement of the spleen, the intensity of the jaundice, the leucin and tyrosin in the urine, all pointed to the syphilitic nature

of the disease, rather than to a simple catarrhal jaundice. Added weight to the presumptive diagnosis was given by the associated nephritis. During the first few days of observation the patient's condition became much worse, the liver appreciably decreased in size day of day, confusion and delirium set in and we were faced with the clinical picture of acute yellow atrophy. Under vigorous mercurialization, together with large doses of iodid of potash administered at this stage, the patient made a rapid recovery and was apparently restored to complete health.

Since the employment of arsphenamin and its derivatives in the treatment of syphilis, a new type of jaundice has been added to those hitherto known. This jaundice may be mild in type, in which case it is apparently due to the retention of arsenic in the liver. Severe cases leading to death, however, are reported in the German and French literature, in which, according to Milian, the condition is a hepato-recidive analagous to that occurring in the nervous system. From a study of these cases, of which I have seen five, I am inclined to believe they are in no way related to the condition just described.

Icterus gravis syphiliticus, unrecognized, carries with it the prognosis of acute yellow atrophy. Recognized and differentiated from other forms and intelligently treated, it presents a clinical picture carrying a gratifying prognosis in the face of a seriously grave destructive process.

SYPHILITIC CIRRHOSIS

If I have had the temerity to bring up a subject, the clinical aspects of which are no doubt thoroughly familiar to clinicians in general, it is because I am convinced that great confusion exists in the correlation of the pathologic and clinical features of late syphilis of the liver. The pathologic status of liver syphilis, moreover, is today a confused and debatable field among pathologists. From the pathologic side it may be accepted that late syphilitic hepatitis is due to direct involvement of the parenchyma on the one hand, and primary involvement of the blood vessels with secondary changes in the parenchyma on the other. Undoubtedly most cases combine both features.

Various types of hepatic syphilis are described as pathologic entities which do not in fact have their clinical analogues. The attempt to differentiate clinical forms of liver syphilis, so that they shall correspond to the kaleidoscopic pictures of the patholoogist leads to confusion. The entire status of the cirrhoses, syphilitic and otherwise, is today a matter of debate and polemic. In the gross and microscopic pathology of liver syphilis certain facts stand out which, if recognized and emphasized, would lead to a clearer understanding of the clinical phases of the disease.

Two Forms of Late Syphilis of the Liver.—Late syphilis of the liver is either diffuse or circumscribed. The diffuse forms, consisting

of multitudinous infiltrates and miliary gummas, lead to an extensive interstitial fibrosis. The more circumscribed form, consisting of isolated infiltrates and larger gummas, leads spontaneously and under treatment to localized fibrosis. The end-result in either case is identical — a cirrhotic liver. A combination of these two forms is perhaps more common than either one alone. Reconstructing the pictures clinically, therefore, one has a small atrophic liver, with or without ascites, and resembling the Laennec type as a result of diffuse infiltration, and a lobulated, either hypertrophic or atrophic liver, cirrhotic in patches, resulting from the more circumscribed type. The latter is the so-called "hepar lobatum."

The reason one or the other type predominates in a given case would lead us into the realm of speculation. It is not impossible that previous liver injury or disease, and the predominance of syphilis of the hepatic blood vessels, are causative factors.

Alcohol as a Predisposing Factor.—Among other factors which are emphasized as predisposing the liver to syphilis, alcohol stands out. McCrae asserts that it is an important factor, and in only five of his seventy cases was alcohol not used freely. In my own series of closely studied cases I cannot subscribe to this view. Alcohol played a minor, if any, rôle in the causation of the disease in my cases. Interesting in this connection is the fact that certain pathologists today deny the existence of an alcoholic atrophic cirrhosis and are inclined to regard this as always syphilitic.

Size of Liver.—The question of the size of the liver is a matter of much confusion to clinicians but of little moment. It depends not so much on the difference of form of cirrhosis present as to the time when the patient is seen. I have repeatedly seen hypertrophic livers become distinctly shrunken and gradually recede during the period of treatment, underneath the costal border. In about half the cases in my series the liver was extensively enlarged at the first examination. In practically all at a later date hypertrophy became less marked. Enlargement of the spleen is an early and constant finding, and I believe of great differential diagnostic importance.

Symptomatology.—It is a well established fact that an advanced degree of either one of the two types of hepatic syphilis or their combination may be present without any symptoms, and may be an accidental necropsy finding. In this connection I have been impressed by the frequency of symptomless hepatic syphilis, associated with tabes and with other forms of visceral syphilis.

The morphology, then, of clinical hepatic syphilis depends on the appearance in the one case of tumor, in the other of obstructive portal circulation leading to ascites and the combination of these two con-

ditions. There is no reason for a detailed description of the various symptoms that may or may not be present with interstitial syphilitic cirrhosis. These are familiar to all clinicians of experience. In the light of biologic laboratory tests and in the more close observation and study of syphilis less and less mistakes occur in the diagnosis of this condition. There are certain therapeutic considerations associated with liver syphilis, however, to which I beg to direct your attention.

Prognosis.—The consensus of opinion is that, compared with other forms of hepatic disease, syphilitic hepatitis has an admirable prognosis. I wish to concur in this view in so far as it applies to the focal types, i. e.: gummous hepatitis, hepar lobatum, and to certain cases of the interstitial type.

During the past eight years I have had a very unusual opportunity of studying many cases of hepatic syphilis in its various forms at the University Hospital. Given equal conditions, I have been struck with the great difference in the prognosis as worked out in various cases. I have been able to separate my cases broadly into three classes. The first type is syphilitic cirrhosis, in which gummous tumors were the predominating features. In a general way the prognosis of this condition stands out as the best of the three types. The second type consists of combined gummous hepatitis and interstitial cirrhosis, in which not only tumors are present, but there are associated cirrhosis symptoms. In this type, as well as in the third class, that of the pure interstitial and diffuse type, an apparent paradox in the treatment occurs. Patients improve with regard to syphilis and become worse or die from cirrhosis.

The reason for this is not difficult to understand. Hepatic syphilis in any case is but one phase of a widespread constitutional infection, one phase of an extensive visceral syphilis. Improvement in general health, improvement in associated anemia, in the not infrequent nephritis and in general vascular tone may be expected and is usually noted, following specific treatment.

What happens, however, to the liver? The gummatous masses in the combined form disappear rapidly. They are replaced by scar tissue. The associated multitudinous microscopic syphilomas are likewise rapidly dispersed. In both instances the replacing scar tissue produces a more advanced degree of cirrhosis than was caused by the gradual attrition of the disease process. At the end stage, therefore, one has to do not only with the disease itself, but with the mechanical factor of pressure from scar tissue.

In this type of case my experience has been that there is an immediately apparent improvement in the patient's general condition, soon dispelled, however, by the more rapid onset of ascites.

Indeed in not a few cases the ascites has first appeared following the improvement in the general condition. In a case under my care at present it has been necessary to perform paracentesis twenty-six times at weekly intervals, a total amount of over one hundred and fifty liters, more than twice the patient's weight, being removed. In this type of case there can be no question of a collateral circulation being established. Indeed this in itself could lead to no improvement in the condition. The graveness of the condition is due rather to the throwing out of function of the liver as a secreting organ than to the ascites. Exhaustion and death are the rule in this type and occur as a direct result of disturbed metabolism.

Correlation Between Pathologic and Clinical Findings.—In conclusion may I be permitted to emphasize the fact that an easier correlation between pathologic and clinical findings would be possible if it were remembered that the differences in the pathologic and clinical features are rather those of degree, size and time than of morphology? The determining factors in recovery in the last analysis that are likewise the determining factors in the differences of the clinical and pathologic features are: First, that unknown factor which determines the circumscription or diffuseness of the process — in other words, the extent to which complete fibrosis and inclusion of liver tissue in scars occurs; second, the extent to which compensatory hypertrophic lobules of liver tissue can find access through the scar tissue to the circulating blood. Alcohol, in my experience at least, plays a minor rôle, if it is of any significance, in the pathology and clinical features of this form of the disease.

THE PHYSICS OF THE ROENTGEN RAY

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The increasing use of roentgen rays in the treatment of cutaneous diseases make the fundamental laws of their production and their physical characteristics of more than passing interest. That the busy practitioner cannot spend the time to become a trained physicist is obvious, but it is equally certain that some general ideas may be of value in the selection of apparatus and in the rational use of the roentgen ray. While a single, brief article cannot fully serve this purpose, it may be of service in presenting the main physical features.

ORIGIN OF ROENTGEN RAYS

Roentgen rays are one manifestation of what the physicist refers to as energy of radiation, of which light and radiant heat are the more generally known. These radiations are originated by some disturbance of the minute parts of which matter is composed, i. e., of molecules, atoms or of subatomic bodies called electrons. The latter have borne various names during the development of modern views on electricity, such as cathode rays, beta rays, etc. They play an important part in all physical phenomena, especially in roentgen rays and in radioactivity.

It may be well to state that the term ray is used to indicate two unlike classes of physical phenomena in both physics and medicine. In one class small particles of definite size and properties are projected from matter into the surrounding space. Thus, when an atom of radio-active matter breaks down there may be projected alpha particles or rays, beta particles or beta rays. These differ in size and electrical quality as well as in velocity. They are concrete entities that may be counted and studied as individuals. Again we use the term ray to define the path along which some wave-like disturbance travels as in the case of light rays, heat rays, roentgen rays and gamma rays, where no transfer of matter is involved.

A bullet dropped on the surface of still water might, if we wished, be called a lead ray and the radii of the spreading waves system set up could be named some sort of rays, but they would only indicate a direction of wave propagation not material. In the case of sound the direction along which sound is received might be called a sound ray, but no projectile is involved.

The phenomena of sound may readily serve to illustrate certain terms used in this article that are often not well understood. Consider the case of the piano — a tense string receives a blow from a hammer. The hammer is said to cause a mechanical disturbance at the point of impact. A passing on of this disturbance to successive portions of the string results in setting up what are called waves along the string. These waves travel in the string with velocities determined by its weight and tension, so that a single displacement results in a vibratory system of waves. If the tense string is long and heavy, these waves will be long and of low vibration frequency; if short and light, the waves will be short and the frequency will be high. The string also becomes a source of waves transmitted by the air, known as sound waves. These are never simple, but consist of many frequencies and wave lengths, all propagated at the same velocity.

The particular characteristic of sound that is related to wave length is pitch, while the quality of a sound is fixed by the total number of pitches composing it and their individual loudness.

Turning now to light we have the same general ideas, but the source, the transmitting medium, the wave lengths and the frequencies are all of quite another order and are appreciated by a different sense mechanism. While sound requires a tangible material for its propagation, such as air, wood, water, etc., light, while originating in some substance may be propagated through the most complete vacuum. Experiments have shown conclusively that light is due to electromagnetic actions and originates in the disturbance of the electrical components of atoms. The same is true of roentgen rays and gamma rays which, like light, are not corpuscular or due to projected particles, but are real electromagnetic waves. We may compare sound and light roughly as follows:

TABLE 1.—Comparison of Sound and Light

	Sound	Light
Source	Material vibrating bodies	Vibration of parts of atoms far too small for microscopic vision
Frequency	From 30 per second to a few thousand per second	Of the order 100 million million per second
Wave length	A few inches to several feet	Expressed in hundred millionths of a centimeter
Velocity	About 1,200 feet per second	About 186,000 miles per second
Composition gives	Quality	Color value

Roentgen rays in turn differ greatly from light waves. Their vibration frequencies are even greater and their wave lengths much shorter; their velocity of propagation and origin are, however, the same as for light. One can hardly conceive of the very minute quantities involved in the production of these rays or the shortness of their wave length, but an idea of relative sizes may be gained by comparison.

It is customary in physics to select such units of measurement as will avoid the use of very small fractions or of very large numbers. Thus the micron, or one one thousandth of a millimeter, is often used as a unit in microscopy. An average hair is about 20 microns in diameter or 20/1,000 mm., 2/1,000 cm.

In measuring wave lengths of light the Aengstrom or 1/100,000,000 cm. is usually chosen as a unit. The wave length of yellow light from sodium vapor is about 6,000 of these units, while roentgen ray wave lengths would be expressed by fractions of an Aengstrom. Thus we have the diameter of a hair, 0.002 cm.; wave length of yellow light, 0.00006 cm.; medium roentgen-ray wave length, 0.000000005 cm. Multiplying these fractions by 10 nine times, we have: roentgen-ray wave length, 5; yellow light wave length, 60,000; diameter of hair, 2,000,000. So that the hair could contain four hundred thousand of these roentgen-ray wave lengths in its own diameter.

It is, then, clear that these waves are of exceeding "fineness of grain," if we may use a common term. The distance between atoms in crystals of metals is from 2 to 4 Aengstroms, so that such atoms are separated by a distance equal to several wave lengths of roentgen rays such as are commonly used. It may readily be seen how the behavior of such waves would be differently affected by matter than would long ones.

The origination of such minute waves is due to disturbance of electrons. These consist of, or else carry at all times, a definite electric charge. They are essential elements in the structure of all atoms, and may be torn out of any atom by suitable physical agencies. They are much smaller than the atoms of any known element. If we could magnify sufficiently both electrons and the surface of polished metal, the irregularities of the surface would appear like mountains and valleys, while the electrons would be almost too small to be seen. For our purpose only two means of separation of electrons from matter need be mentioned: these are (1) the breakdown of gas molecules in a vacuum tube, (2) their shaking out from the atoms of a very hot metal. The first serves for the operation of the older type of gas tube, the second is used in the Coolidge tube.

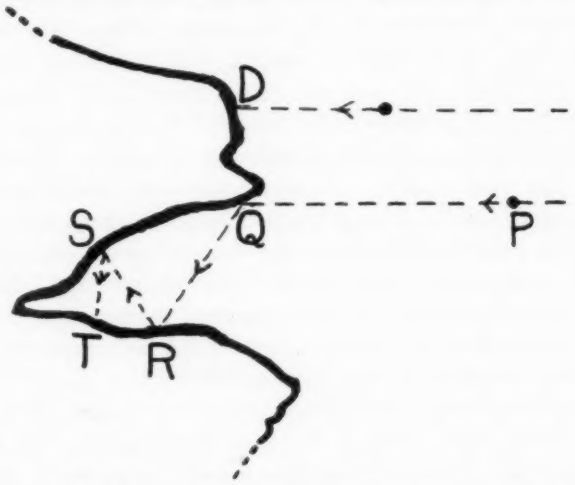
CONDITIONS NECESSARY TO PRODUCE RAYS

The condition under which these minute electrical bodies produce the rays is fairly simple, namely, during the time of starting or stopping electrons are sources of gamma or of roentgen rays. In just what manner this results we may not know, but we have indisputable evidence of this origin of the rays. Again let us use the crude analogy of the tense string; imagine that a wave travels along the string at the rate of 10 feet per second, and that a moving body acts for two seconds

at one point, the wave started at the instant of impact and the initial disturbance moves along the string without reference to whether the disturbance was continued or not, so that when the two second disturbance is completed a portion of string 20 feet long will be in action and will constitute one wave length.

We have a great variety of experiments showing that only when the velocity of electrons is suddenly changed do we get the short electromagnetic waves known as gamma rays or roentgen rays. The former are due to the sudden starting of electrons by the explosive breakdown of atoms, the latter to the reduction of velocity by impact on an obstacle.

In Figure 1, imagine an electron moving toward the rough surface at *P*, its speed will be somewhat altered at this impact, and it may be



Fif. 1.—The possible course of an electron striking a polished metal target and deflected several times before coming to rest; path, *P-Q-R-S*, etc. A different wave length may be originated at each impact. Also possible central impact at *D* giving a single wave length.

deflected to *Q* and then to *R*. During each contact or period of change in velocity a roentgen ray will be originated. Thus, a group of these rays may be started by a single electron. On the other hand, direct impact, as at *D*, would set up a single wave of greater energy for the same initial electron speed than in the previous case. The irregularities of a highly polished metal surface are doubtless much greater than those shown in comparison with the diameter of an electron.

In the operation of a roentgen-ray tube, electrons in enormous numbers are separated from atoms and by reason of their electric charges are given almost unbelievable speed and strike the hard metallic surface of the anode or target with the result described above. For a

target of given material (tungsten is now almost exclusively used), only two operating factors need concern the therapeutist. The nature and the quantity of radiation is absolutely fixed by the number of electrons used per second and their striking speed. Fortunately, we neither need to count them nor actually to measure their speed. A properly calibrated milliameter tells the relative number of electrons, and the electric difficulty of driving them through the tube indicates their speed. The latter might be measured by suitable electric instruments (volt meters) or spark gap meters, but those hitherto provided are not generally reliable, so we offer the electric stream an opportunity to pass around the tube between two adjustable points constituting a spark gap.

Thus a tube carrying 5 milliamperes under conditions such that it is about equally difficult for the discharge to pass through the tube as through 5 inches of air between needle points is furnishing each second a definite amount of radiation of specific quality.

MEASUREMENT OF RAYS

We may now consider what meaning should be attached to the terms quantity and quality. Since we have no special sense organs that enable us to see by roentgen ray brightness or recognize anything comparable to color in light, we must derive our information in other ways. The quantity of light from a given source might be found by allowing it to be transformed into heat and measuring the latter, but we should find that such a measure would not be comparable with that made by using some other effect due to light.

Thus, an amount of red light giving, when transformed, a definite amount of heat would produce far less effect on the eye than would green light of the same heat equivalent and the action of red light on a photographic plate would be nothing as compared to that of its heat equivalent in violet light.

The following effects due to roentgen rays have been used as a measure: (1) The photographic effect; (2) color change in certain chemicals; (3) separation of electrons from atoms (ionization) (photo electric action, etc.), and (4) heat produced when absorbed. But as in the case of light the results of such measurements are not always comparable. At present even the radiation from light sources is measured by observing the factors governing production. Thus an incandescent lamp of 20 candlepower is of that power only when operated at a given voltage, so that it carries a specific current. We may well come to measure roentgen rays in the same terms.

In order to study completely light from a given source, we find it necessary to sort out the separate wave lengths and to study each wave length alone as the ability of these various waves to cause cer-

tain effects vary widely with wave length. Thus, as noted above, the long waves (red light) are most effective in heat production, shorter ones are more vigorous in chemical action. etc. One way of sorting out the various waves is to pass the light through or reflect it from a glass plate on which many regularly spaced fine lines have been ruled (diffraction granting). This will cause the red light to proceed in a direction different from the green, etc. On account of the extremely short wave length of roentgen rays, a polished glass surface is too rough, and our finest lines are too coarse to permit ruling such a grating for these rays; but in crystals we have an arrangement of atoms in planes making an equivalent grating by means of which a roentgen-ray spectrum may be studied.

Such analyses of the roentgen-ray output of a tube has been made at various operating voltages (spark gaps) as shown in Figure 2.

Distances from the horizontal base line indicate ability of the radiation to cause a certain physical change or roughly the roentgen-ray energy, while distances along this base line are roentgen-ray wave lengths in Aengstroms or 10^{-8} cm. Each curve of Figure 2 shows the distribution of roentgen rays among the wave lengths present for a single operating voltage (spark gap).

Three important points stand out clearly from these curves: (1) The energy of all wave lengths present in any low voltage curve is much increased when the voltage is raised. (2) Raising voltage adds short waves not present at lower voltages. (3) The wave length for which the energy is a maximum is shorter at the higher voltages. It should be clearly noted that any change in current at a fixed voltage would not alter the shape of the spectrum curves.

Since the radiation at 40,000 volts contains waves not present at 30,000 volts, and the distribution of energy among those wave lengths common to both is different in the two cases, we say that the quality of the rays is different when the tube is operated at different voltages.

One should not lose sight of the fact that these spectra are not accidental; the distribution shown for 40,000 volts is characteristic of that voltage and of no other. Hence when we reproduce current and voltage of operation of a roentgen-ray tube we reproduce both the quantity of radiation per second and its quality.

Note again the analogy with light. We do not measure light directly, but we specify the voltage at which a given lamp must be run for say 16 candlepower, and as the lamp takes a definite current at this voltage it is comparable to our roentgen-ray tube.

The emitted radiation spreads in a hemisphere from a small area on the target on which most of the electrons impinge. One should clearly understand the flow of radiation outward with the gradual reduction of action on equal areas exposed. Roentgen rays travel in

straight lines from the source (except as scattered. See below). If in Figure 3 the area *A B C D* receives a certain energy per second from the target, omitting scattering or absorption, the energy received by *A B C D* would be spread over *I J K L* on the more distant plane, but these areas are in direct proportion to the squares of their distances from *F*. Thus the action of every wave length and of all waves on a receiving body decreases for a given receiving area as the square of the distance increases. Thus, if 1 square cm. of skin at 10 inches from the target would receive in a given time *Q* units of radiation, one 11

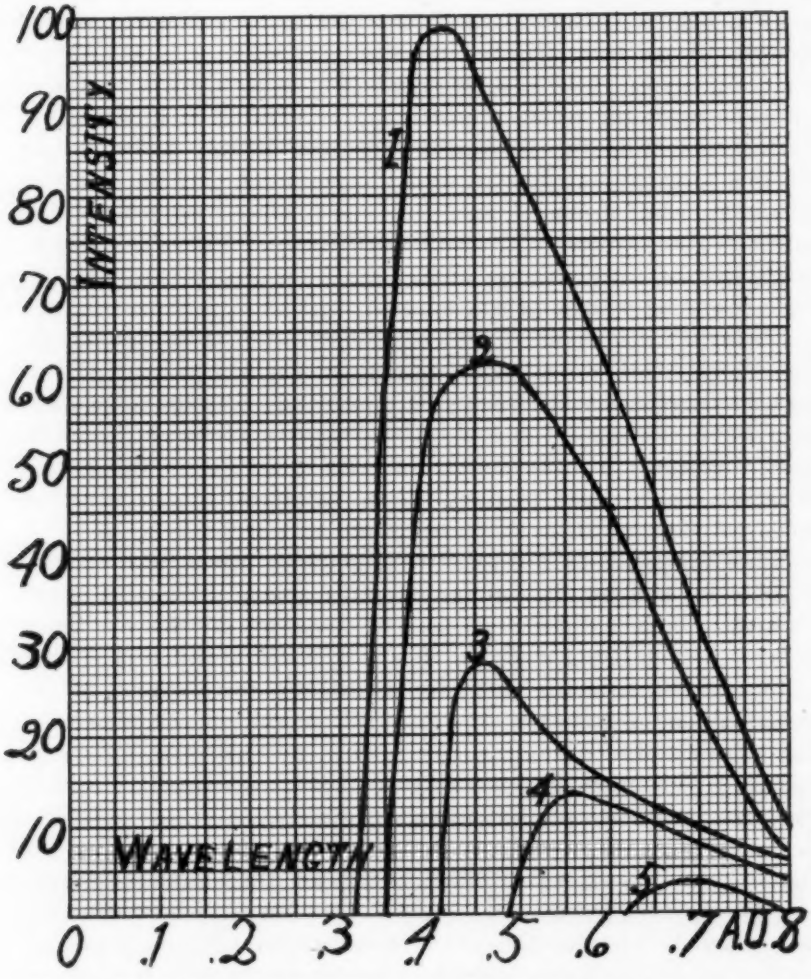


Fig. 2.—Vertical lines show roentgen-ray intensity in arbitrary units. Horizontal lines show roentgen-ray wave lengths in Aengstroms (10^{-8} cm.). Operating voltages: (1) 40,000 volts, (2) 35,000 volts, (3) 30,000 volts, (4) 25,000 volts, (5) 20,000 volts; measurements by Dr. Hull.

inches away would receive $\frac{100}{121}$ Q. The curve in Figure 4 shows how the surface radiation varies at distances commonly used in therapy. Figure 5 and Table 2 show how exposure times vary for various distances when one must, for any reason, vary from their usual working distance.

TABLE 2.—NUMBER OF MINUTES AND SECONDS REQUIRED TO GIVE EQUAL DOSAGE AT VARIOUS DISTANCES RELATIVE TO THE STANDARD CHOSEN

Inches	6		7		8		9		10		11		12		13	
	Min.	Sec.	Min.	Sec.	Min.	Sec.	Min.	Sec.	Min.	Sec.	Min.	Sec.	Min.	Sec.	Min.	Sec.
6	1	00	0	43	0	33	0	27	0	21	0	17	0	15	0	12
7	1	21	1	00	0	45	0	36	0	29	0	24	0	20	0	17
8	1	45	1	18	1	00	0	47	0	38	0	31	0	26	0	23
9	2	15	1	39	1	16	1	00	0	49	0	40	0	33	0	29
10	2	46	2	3	1	33	1	15	1	00	0	49	0	41	0	35
11	3	21	2	27	1	53	1	30	1	12	1	00	0	50	0	43
12	3	56	3	0	2	15	1	46	1	26	1	11	1	00	0	51
13	4	42	3	27	2	38	2	3	1	41	1	24	1	10	1	00
14	5	37	4	00	3	3	2	25	1	57	1	37	1	21	1	9

If 8 is the usual or standard distance, look for 8 at the top of the table. To get an equivalent dose at 6 inches, use 33 seconds for each minute at 8 inches. At 11 inches use 1 minute 53 seconds for each minute at 8 inches, etc.

The practitioner may well note that when he attempts to work with the tube too close, errors in measuring the distance from the focal area on the target to the glass wall and from glass to patient may become very important. Thus if one made an error of one-half inch when working at a supposed 12-inch distance the error is very nearly twelve parts in 144, while if supposed to be at 7 inches and it is actually at 7.5 the error is 7 in 49 approximately, or $\frac{1}{7}$ instead of $\frac{1}{12}$ as in the former case.

REDUCTION OF INTENSITY OF RAYS

The next important point to be considered relates to the reduction of intensity when these rays pass into or through various materials. Before the discovery of the method of spectral analysis all our information was derived from more or less uncertain measurements of absorption.

The term absorption is used to denote a simple reduction in wave energy due to some action on the material through which the wave moves. Thus, if we pass a beam of light into clear water there will be a loss of illuminating power not explained by reduction due to increased distance from the source. This results in a rise in the temperature of the water showing a transformation of a portion of the energy of short light waves into heat. Again, loss of light might result in chemical action. So in the case of roentgen rays, if in Figure 3 the energy passing through $I\ J\ K\ L$ is less than that passing $A\ B\ C\ D$ we say there

has been absorption in the intervening material. It is not so easy to say just what form the transformed energy has taken in this case, but a very small amount of heat is produced and ionization, electrochemical action or the production of long wave light rays in the absorbing body must account for the remainder.

As in the case of light, absorption depends on the material traversed and for a given material is dependent on the wave lengths received.

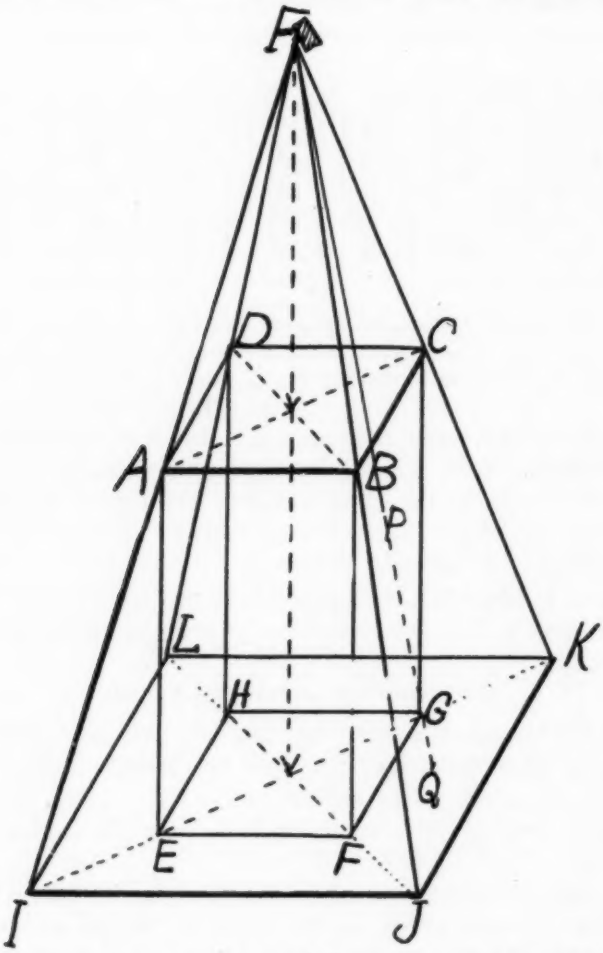


Fig. 3.—*F*, focal spot on target; *A B C D*, an area receiving radiation; *I J K L* would receive the same radiation at the greater distance from *F* that *A B C D* receives at the nearer. Hence an equal area at the greater distance receives less, i. e., *E F G H* receives less radiation than *A B C D*. Note that each area of the rectangular prism *A G*, as we go down, receives less radiation because rays entering the prism above pass out through its lateral walls. As the target is moved farther away the rays become more nearly parallel to the edges *A E*, and less radiation leaves through the sides of the prism.

One of the most striking characteristics of the roentgen and gamma rays is their penetrating power, i. e., their relatively slight absorption, many substances highly opaque to light or heat showing extreme transparency. Also this is found to vary according to the voltage (spark gap) at which the tube is operated. The term penetration was used to describe roughly this general quality of the radiation and has proved a rather unfortunate concept. For while increased spark gap does raise the "penetration" by adding shorter and less easily absorbed waves, it also greatly increases the amount of radiation per milliam-

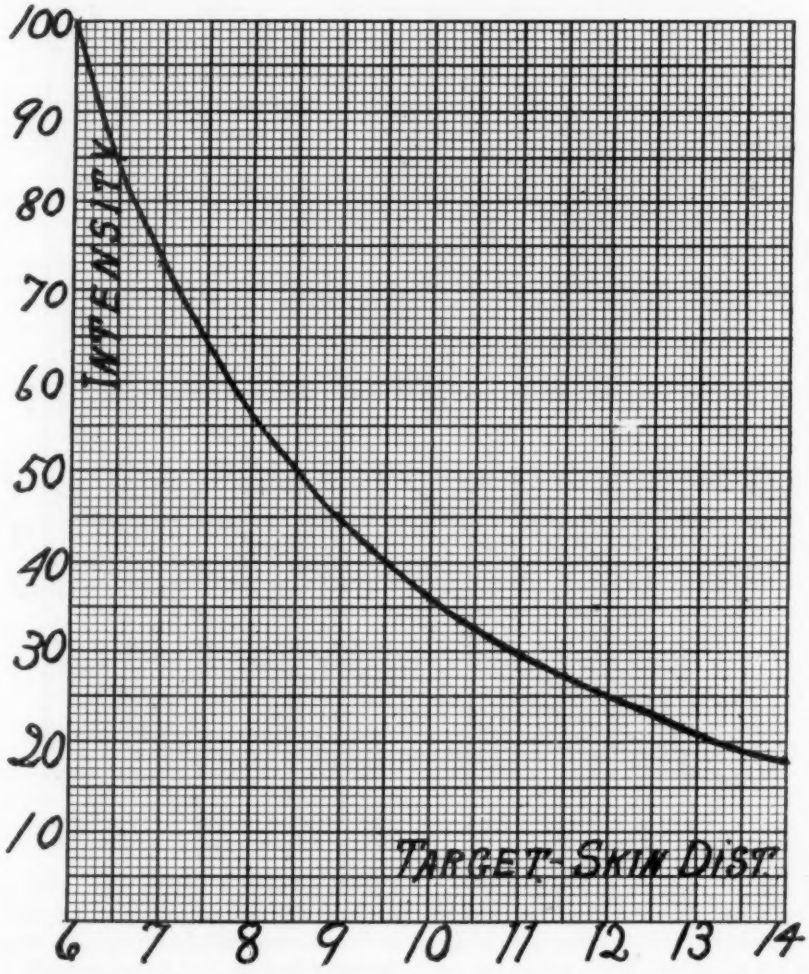


Fig. 4.—If a surface 6 inches from the target receives in a given time 100 units of radiation, surfaces of equal area at points more remote will receive the amounts indicated. Thus one at 10 inches will beceive 36 units for every hundred received at 6 inches.

pere, and after we reach a moderate gap the increase of "penetration" is relatively slight.

If we first consider a single wave length for the sake of simplicity we may state the known facts as to absorption: 1. The intensity is reduced in passing through a given thickness of material nearly in proportion to the physical density of the material. (Some variations are noted and "scattering" must also be considered). 2. If at the first

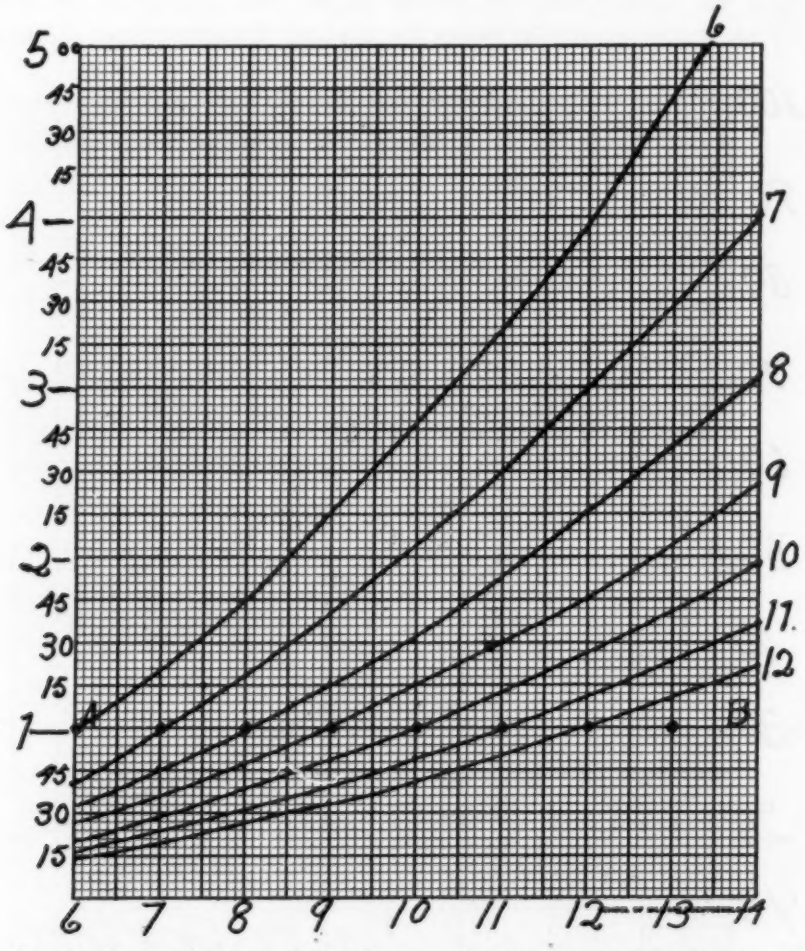


Fig. 5.—Curves showing relative times required to give equal dosage at various distances. The line *A B* is taken as a base line for reference. The curve marked 6 means that taking 6 inches as the normal working target plate distance if we change to 7 inches then for every minute exposure at a target distance of 6 inches we must expose 1 minute 21 seconds at 7 inches, 2 minutes, 45 seconds at 10 inches, etc. If the usual distance chosen is 10 inches and one wishes to repeat the dose but at 8 inches, then for 1 minute at 10 inches (Curve 10) 39 seconds will be needed at 8 inches, etc.

surface of a layer of thickness, t, the intensity is Q_1 and at the distal surface it is Q_2, then the quantity $\frac{Q_1-Q_2}{Q_1}$ represents the percentage absorbed in the layer. 3. The next layer of like thickness will absorb the same fraction of what its proximal surface receives, and this will be true for each layer in succession (observe the limitation to a single wave length).

Thus, if a layer 1 mm. thick of a given material will absorb 0.04 of the radiation received of a given wave length and 100 arbitrary units fall on the surface of a block of this material, the amount passing successive layers each 1 mm. thick will be:

First surface	100
1 mm. below	96.
2 mm.	92.16
3 mm.	88.47
4 mm.	84.93
5 mm.	81.53, etc.

Each number being obtained by multiplying the preceding by 0.96. The amounts absorbed by the several millimeter layers are

1	4 units
2	3.54 units
3	3.69 units
4	3.54 units
5	3.40 units, etc.

Assuming that the source is so far away that we may neglect an increase of distance up to 5 mm.

For this same absorbing material and a longer wave length the first millimeter may remove 0.1 of the surface radiation. Then the series for 100 units on the proximal surface will be:

First surface	100	Left in first mm.	10
1 mm. below	90	Left in second mm.	9
2 mm. below	81	Left in third mm.	8.1
3 mm. below	72.9	Left in fourth mm.	7.29
4 mm. below	65.61	Left in fifth mm.	6.56, etc.
5 mm. below	59.05		

Observe now that 5 mm. in the first case have absorbed only 18.17 units, while in the latter 40.95 units are absorbed. Also we must note that the ratio of absorption in the first millimeter to that in the fifth is quite different, 4:3.4 and 10:6.56 or 1.17 and 1.52 in the two cases.

We see then that the higher the rate of absorption of the material for the wave length considered, the more the first layers absorb and the greater the difference between that absorbed in the first millimeter and that in any given millimeter below the first.

The actual output of the tube always contains a great variety of wave lengths, and each wave length has its own rate of absorption, but the rate is always less for short than for long waves. Figure 6 shows the effect of 3 mm. of aluminum on the radiation at 70,000 volts (about a 6-inch gap) as measured by Hull. We see that no rays of wave length exceeding 0.7 x 10^{-8} get through. Also the intensity of wave length 0.5 x 10^{-8} is reduced from 50 units to 14, 0.4 x 10^{-8} from 100 to 80. Or the transmissions in percentages of initial quantities are:

Wave Length	Percentage
0.5 by 10^{-8}	28
0.4 by 10^{-8}	50
0.3 by 10^{-8}	80

The percentages absorbed are:

Wave Length	Percentage
0.5 by 10^{-8}	72
0.4 by 10^{-8}	50
0.3 by 10^{-8}	20

The 3 cm. of aluminum absorb for this voltage very nearly one-half of the total radiation, but take their toll largely from the longer wave lengths.

To emphasize this matter still further, consider Hull's spectrum curves at 40,000 volts and at 30,000 volts and apply the same percentage reduction by 3 cm. of aluminum for the same wave lengths as in his 70,000 volt curve as far as they are present at these voltages. Figure 7 shows the results. The area under A is proportional to the unfiltered radiation, that under A' to the filtered radiation for 40,000 volts. B and B' are the same for 30,000.

We may definitely say from these results that: 1. The total radiation from a tube operated at low voltage is less than for one operated at the same current at high voltage. 2. The energy from the low voltage tube is more easily absorbed. 3. The proportion absorbed in the first layers is much greater at low voltage than at high.

But the therapeutist may well be excused if he asks, "What has the results of absorption in aluminum to do with the biologic action of these rays?" The answer is plain if we assume (what seems almost an axiom to the physicist) that the biologic action is entirely due to that part of the radiation actually absorbed.[1] This granted, we may at

1. In asserting that the biologic action is due to rays absorbed, one must keep in mind that definite action may occur in regions more or less remote from the area in which absorption takes place. The processes of cell destruction and repair are subject to modification in so many ways that it is quite possible that minute changes in secretion and the fluids of circulation may occur when the rays are absorbed and thus produce changes in relatively remote tissue. In other words the effect on the organic machine must be considered as a whole, and while the initial impetus may be due to absorbed radiation, the systemic effects may be widespread and important.

once call attention to the fact that the general distribution of absorbed radiation in successive layers for a given wave length is similar for all substances, differing only in the thickness of layer required to absorb a specific percentage. Thus, a thickness of human flesh could be found absorbing a given wave length in nearly the same ratio as 1, 2 or 3 mm. of aluminum. In other words, the distribution of the absorbed radiation will be governed by the same general considerations

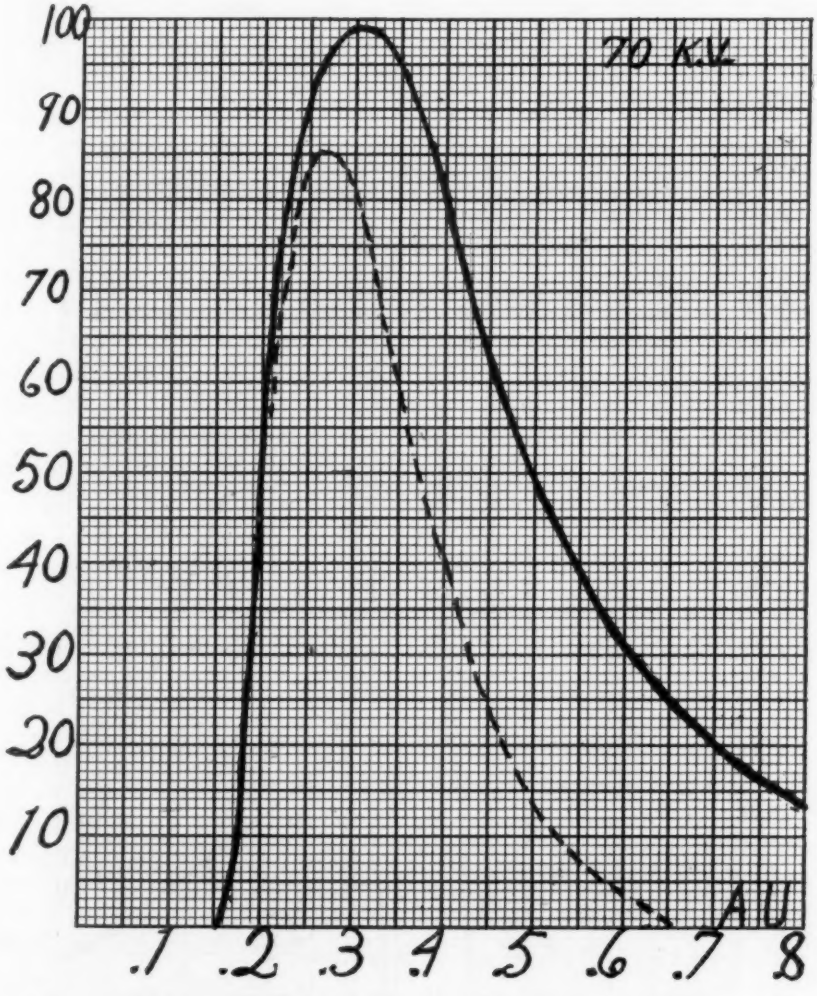


Fig. 6.—Solid line, *A*, shows roentgen-ray intensity of various wave lengths for a tungsten target tube operated at 70,000 volts. The broken line shows what survives after passing through 3 mm. of aluminum. About 50 per cent. of the 70,000 volt radiation is absorbed by 3 mm. of aluminum; measurements by Dr. Hull.

as given above, but it will require greater thicknesses of flesh than of aluminum to absorb a given percentage.

The term filter has been applied to any material used between the tube and the patient's skin. The purpose of the filter is to remove a large part of the radiation that would otherwise be absorbed by the superficial layers of flesh. They are necessary and important for the treatment of nonsuperficial lesions, but in the judgment of the writer they are of little demonstrated value in superficial therapy. It may also be noted that as the rays have passed through the glass wall of the tube they are already in part filtered. On account of the low density of air, both its absorption and its filtering action may be neglected in practice.

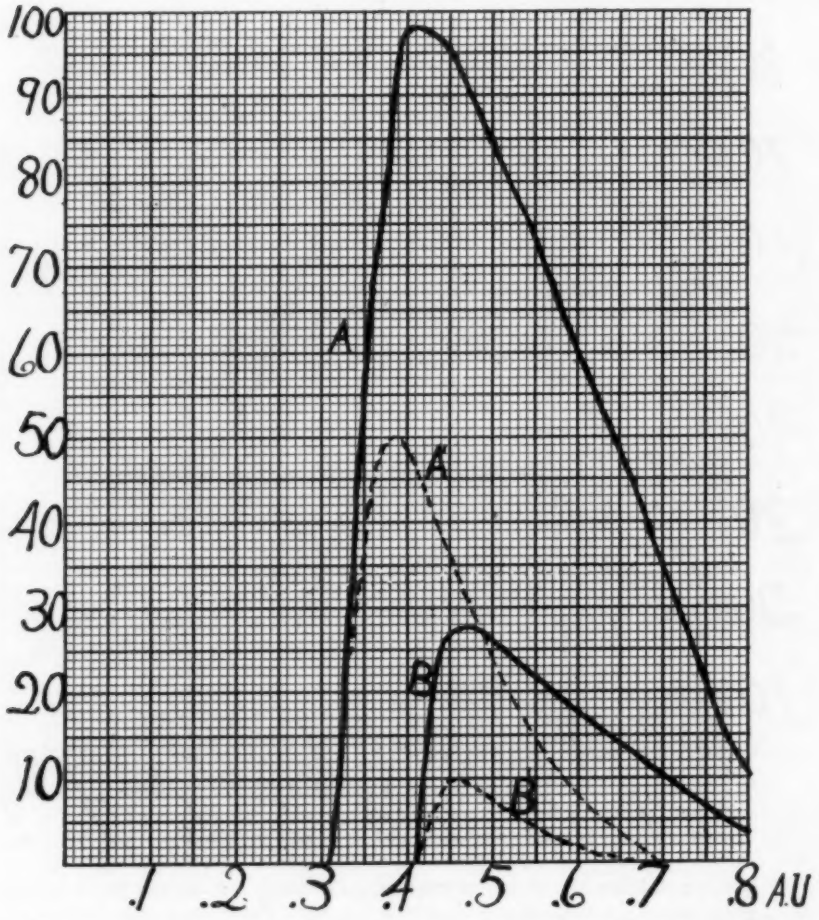


Fig. 7.—Curve *A* shows amount of radiation at 40,000 volts unfiltered. *A'* shows reduction by using 3 mm. of aluminum as a filter. *B* and *B'* show the same for 30,000 volts.

Some difficulty is experienced by many readers as to the significance of the term "secondary" rays, and in fact the term has been used to specify at least three different things, for which other terms might better be used:

1. Roentgen rays coming from parts of the tube other than the focal spot; these may be better designated as parasitic rays.

2. Atoms of matter reflect roentgen rays slightly just as particles of dust or mist will reflect light. This results in a slight diffuse scattering of the initial beam without other change. If we could secure a surface made up of a closely packed layer of completely reflecting atoms we would have a roentgen-ray mirror. As there are no such atoms or any surface of such smoothness and compactness we have only scattering.

3. Also when roentgen rays of sufficiently short wave length (due to proper high voltage operation) strike certain atoms, the original beam may give rise to a new beam whose quality depends on the atomic weight of the affected atoms. These are true charactistic secondary rays. They interest the therapeutist in some cases. If thin metal filters are close to the skin and receive enough roentgen rays of short wave length, the characteristic easily absorbed long wave length radiation may injure the skin. Also when metallic ointments or medication are present in the tissue the true characteristic may give undesired results.

SUMMARY

The general facts stated above may be summarized for application thus:

1. The electrical conditions of operation fix absolutely the radiation delivered per second by a given target; hence adequate control of these conditions will enable complete duplication of radiation both in amount and quality.

2. The two factors to be noted are: (a) Spark gap or tube voltage; (b) current in milliamperes. Of these, the former is by far the more important.

3. The amount received by a given layer of tissue when the tube is operated for a definite time under prescribed electric conditions depends on two things: (a) The distance from the target; (b) the nature and thickness of all material through which the rays have passed before reaching the tissue treated.

4. The reaction to roentgen rays by living tissue is due to rays absorbed.

5. There is no evidence at present that the biologic effect depends on the particular wave lengths absorbed.

6. The biologic effect doubtless depends not only on the total amount absorbed, but to some extent on the rate of absorption; in other words, on the frequency of treatment as well as on the quantity of radiation.

7. Layers of tissue near the surface of entrance always receive and absorb more radiation than the deeper layers.

8. The inequality of absorption between deep and surface layers due to decrease of intensity with distance is reduced by increasing the distance of the tube from the skin.

9. The inequality of dose between different layers is reduced by the use of filters.

10. This inequality is also reduced by operating at a moderately high voltage.

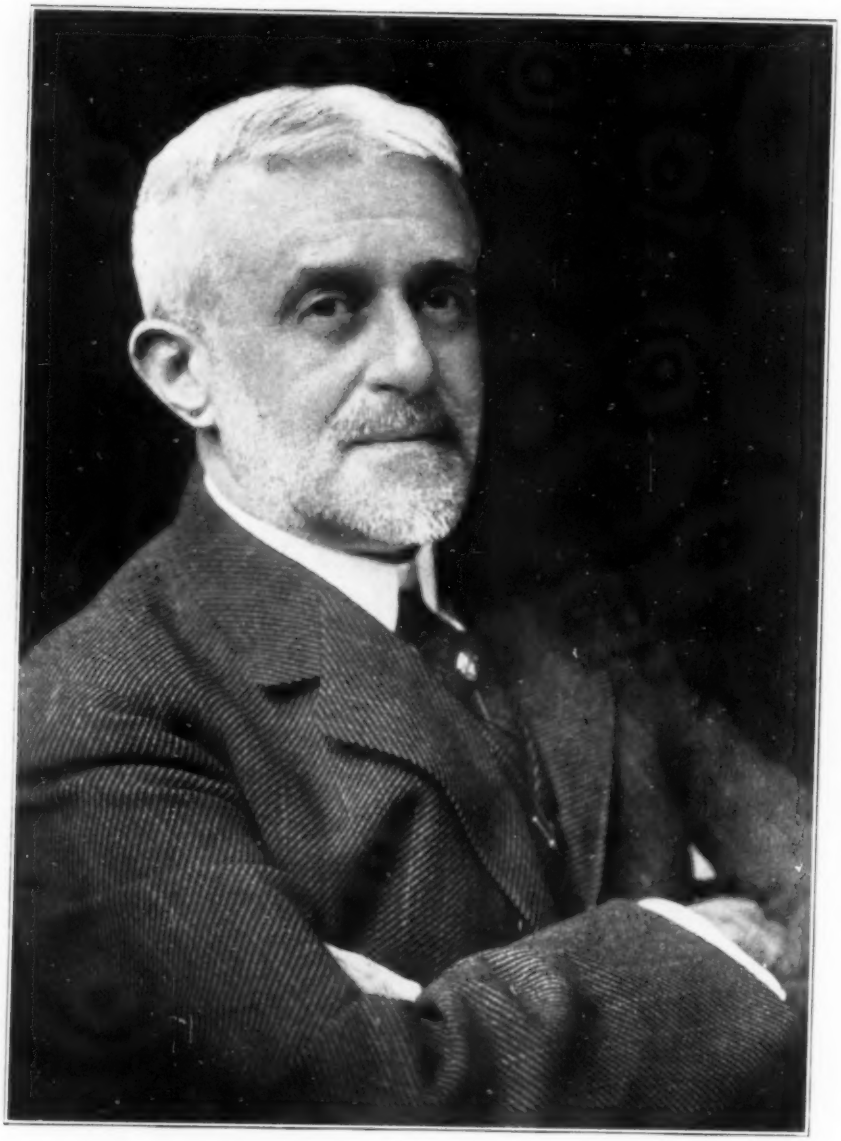
Assuming that one desires to limit the effect as far as possible to a thin surface layer, these facts would indicate a tube fairly close to the skin, operating at rather low gap and without filter. On the other hand, if one wishes to minimize the skin effect and secure more absorption in the deeper layers, the reverse would be true within reasonable limits, namely, greater target skin distance, higher spark gap and filtration.

Suppose now we attempt to measure the surface radiation. This can only be done by using some device to absorb all or part of the rays and show some observable change due to this absorption. Only a few such absorbers have been found, such as a photographic film or a layer of platinobarium cyanid crystals. Unfortunately these indicators are troublesome for two chief reasons: 1. they absorb a different percentage of the total radiation for different voltages. 2. Successive equal amounts of radiation absorbed do not give equal changes in the indicator. There is, then, no definite connection between their reading and the amount of radiation absorbed by the various layers. It is not within the scope of this article to discuss this matter further; we can merely point out the difficulty.

CONCLUSION

The author believes that the physical side of this work and the apparatus should be developed to such a point that the therapeutist need have no doubt of his dosage and will not have to depend on any of the pastille or photographic methods of measurement. This will require cooperation and training, but would be amply rewarded by the increased usefulness and more extended application of this therapeutic agent.

Cornell University.



WILLIAM S. GOTTHEIL, 1859-1920

Obituary

WILLIAM S. GOTTHEIL, 1859–1920.

The sudden death of Dr. William S. Gottheil came as a shock to American dermatologists. Without previous warning or illness he was stricken down when apparently in the best of health, full of vigor and with energy to practice his chosen field of medicine for many years.

William Samuel Gottheil was born Feb. 5, 1859, in Berlin, Germany. His father was the late Rabbi Gustave Gottheil, and his mother, Rosalie Wollman. He received his early education at the Chorlton High School (Victoria University) in Manchester, England. In 1870 he came to this country and later attended New York University for a short time. In 1878 he received the degree of A.B. from Cornell. In 1881 he graduated from the New York College of Physicians and Surgeons, and from October, 1881, to April 1883, served an internship at the City, then called Charity, Hospital. From 1885 to 1888 he lectured on dermatology at the New York School of Clinical Medicine. In 1907 he was appointed adjunct professor of dermatology at the Post-Graduate Hospital, retaining this position until 1912, when he was appointed professor of dermatology at Fordham University. This chair he held until his untimely death. He was attending dermatologist at Lebanon Hospital and the City Hospital; consulting dermatologist to Beth Israel and Rockaway Beach hospitals, and to the Hospital for Deformities and Joint Diseases.

In 1898 he and several other dermatologists founded the Manhattan Dermatological Society, of which he became president in 1899. He attended almost every meeting of this Society from its inception until his death.

Dr. Gottheil was an artist. At the time of his death he had the largest collection of moulage of dermatoses to be found in this country, each one an excellent reproduction of the original disease. All were of his own workmanship.

He was a prolific writer and contributed a great deal to dermatologic literature. He was the author of an illustrated atlas, and his last work was a stereopticon set of rare dermatoses.

His name is intimately connected with the use of autoserum, and of solid carbon dioxid in dermatology. He was probably the first to advocate and use the insoluble instead of the soluble salts of mercury, and he was active in bringing mercury salicylate to prominence in treat-

ment. Dr. Gottheil was ever mindful of the needs of the general practitioner. Among the first to see the injustice of the proposed health insurance bill, he fought it bitterly and brought his arguments before medical societies so forcefully that at the present time almost the entire medical profession is arraigned against it.

He had an amiable disposition; he was kind to patients and especially to those who assisted him and with whom he was associated in hospital and dispensary work. His advice, which was always guardedly given, was good, sound, solid and sensible. Dr. Gottheil has gone, but his memory will ever be cherished by those whose privileges it was to have had him as a friend and teacher. B. F. O.

Correspondence

CLEARING HOUSE FOR CUTANEOUS FUNGI AND BLASTOMYCES*

To the Editor:—The editorial in the April number of the ARCHIVES in regard to the "study of ringworm in America" has struck a responsive chord in the staff of this laboratory. It is most timely and likely also to stimulate others who have been prying into the edges of mycology, but who have received no encouragement because the importance of the subject did not appear to be as generally appreciated as it should be, and because they felt comparatively isolated in their work. The end-effect under these circumstances would be a decreasing interest in, and finally a cessation of, such investigation in many cases. We welcome the editorial, therefore, as calculated to reveal and focus these scattered activities in mycology and to open avenues of communication between them that will encourage and sustain the work in each center.

The main purpose of this communication is to announce that this laboratory has been working along these lines and will cooperate with others (it is hoped many) in the study of cutaneous fungi. This course has, as a matter of fact, been in our minds for over two years and has produced some small results, which we would like to contribute at this time as a beginning in the movement and as an earnest of our desire to cooperate in it, but which on account of their scope must be postponed to some future time.

We have acquired the following organisms from various sources and have living cultures at present on hand. Some we have cultivated ourselves and others have been donated. Among others, Professor Sabouraud, with whom we have an exchange agreement, has contributed a number: *Achorion schonleinii,* two strains; *Achorion gallinae; Achorion quinckeanum; Microsporon lanosum; Microsporon audouini,* two strains; *Microsporon fulvum; Trichophyton niveum radians; Trichophyton rosaceum; Trichophyton plicatile; Trichophyton fumatum; Trichophyton gypseum; Epidermophyton inguinale,* nine strains; *Sporotrichum schencki-beurmanni; Sporotrichum councilmani; Sporotrichum hamburger* and several animal strains; *Actinomyces bovis; Pencillium brevicaule* (Brumpt and Langeron).

While this list does not appear long in print, it is an ample one for the study of general mycology, and is doubtless larger than any other in this country. Professor Sabouraud tells me that he has sent as many cultures as he has on hand and will forward others as they come in, so that the list is likely to become notably lengthened. The first task indicated in the editorial, namely, the building up of a collection, has thus at least been started here, and we will be glad to undertake the second task, namely, to receive cultures, keep them going and supply subcultures on application. We do not feel in the position at present, however, to identify all organisms in scrapings, hairs, etc., that might be sent to us, as we might be overwhelmed with work and forced to recant.

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As stated before, we should at this time like to call attention to a number of technical points which have halted our progress, and which might save much time and annoyance to others who may be stimulated by the editorial, for the first time to undertake this work, but that is beyond the scope of this note, and will be reserved for a communication to be made in the near future. Suffice it to emphasize the editorial's admonition to comply with Sabouraud's recommendations. Let this book be a guide, not only in regard to ingredients of mediums but also of containers. Unless this is done, we shall all be working at cross purposes, and mycology — certainly cutaneous mycology — will not properly advance.

FRED D. WEIDMAN, M.D., Philadelphia.

WHITFIELD'S OINTMENT

To the Editor:—I was somewhat surprised to see, in a discussion on tinea cruris in the February issue of the ARCHIVES, page 225, the opinion stated that Whitfield's ointment was in action a salicylic acid ointment and that the benzoic acid was inactive. The observers said the salicylic acid alone was effective, and apparently based their opinions on its use without the addition of benzoic acid.

I have not claimed that the formula used by me was the most powerful possible, but merely that it was on the whole effective and certainly cleanly. My first experiments were carried out with 5 per cent. benzoic acid, without salicylic acid and I found, as I think other observers will also find, that in tinea of parts supplied with a thin horny layer the eruption disappeared in four or five days. The salicylic acid was afterward added, especially for the tinea of the toes and fingers, with a view to furthering penetration of the benzoic acid. Strong salicylic acid is undoubtedly beneficial but the 3 per cent. strength contained in my formula is much too weak to be effective in severe cases.

In conclusion, I do not share the optimistic opinion that "Dhobi itch" is easily curable by salicylic acid ointments of any strength. The disease in the feet is common in this country now, and some of my patients have had a relapse after being treated for a year with chrysarobin, strong salicylic acid, my ointment in double strength, strong solutions of cresol and iodin mixed and copper salts deposited by means of the galvanic current.

I am constantly searching for an application which will reach the mold through the thick horny layer of the foot and hand but so far I have not had complete success.

ARTHUR WHITFIELD, London.

Abstracts from Current Literature

SQUAMOUS-CELL EPITHELIOMA OF THE LIP. A. C. Broders, J. A. M. A. **74**:657 (March 6) 1920.

A study and detailed report of 537 cases from the Mayo clinic is given with these points of interest:

1. The 537 cases of squamous-cell epithelioma of the lip in this series represent 26.85 per cent. of 2,000 cases of general epithelioma.

2. Squamous-cell epithelioma of the lip occurs more often in males than in females; the proportion is 49:1. It occurs in patients past middle life; their average age is 57.3 years.

3. The disease occurs most often in farmers; they represent 56.7 per cent. of the cases.

4. A family history of malignancy plays a negligible part.

5. The site of the cancer was preceded by a sore or an ulcer in 63.3 per cent. of the cases.

6. About one fifth of all the patients do not use tobacco, while one half of the female patients do not use it.

7. Of the patients using tobacco, 93.33 per cent. smoke; 78.48 per cent of these use a pipe.

8. A comparison of 500 men without epithelioma of the lip with the 537 patients with epithelioma of the lip shows that the percentage of tobacco users and nontobacco users is practically the same; 78.6 per cent. users and 21.4 per cent nonusers in the former group, and 80.49 per cent. users and 19.51 per cent. nonusers in the latter group, but that the average age of the men without epithelioma of the lip is about nineteen years less than the average age of the patients with epithelioma of the lip at the onset.

9. The most remarkable difference in a comparison of the patients with epithelioma of the lip and the men without epithelioma of the lip is in the method of smoking. The total number of pipe smokers in the former is 78.48 per cent. and the total number of cigaret smokers is only 1.16 per cent., while in the latter the total number of pipe smokers has dropped to 38.03 per cent. and the total number of cigaret smokers has risen to 59.04 per cent.

10. A history of injury plays a negligible part.

11. The duration of the lesion shows a marked variation from 0.08 years to 28 years, with an average of 2.58 years.

12. The greatest diameter of any lesion is 12.5 cm.; the average 2.4 cm.

13. The lesion originated on the lower lip in 95.69 per cent. of the cases, on the upper lip in 3.55 per cent., at the left angle of the mouth in 0.56 per cent., and at the right angle of the mouth in 0.18 per cent.

14. Twenty-nine and five hundredths per cent. of the patients were treated with acid, paste or plaster, etc., before they entered the clinic.

15. Seventeen and eighty-seven hundredths per cent. of the patients were operated on before they entered the clinic.

16. Ninety-six and eight hundredths per cent. of the patients were operated on at the clinic.

17. In 87.01 per cent., the regional lymph nodes were removed.

18. Of the 449 cases in which the lymph nodes or salivary glands were removed, metastasis was demonstrated in 23.38 per cent.; the submaxillary lymph nodes were involved in 87.61 per cent., the submaxillary salivary glands in 21.90 per cent.; the submental lymph nodes in 24.76 per cent., and the cervical lymph nodes in 24.76 per cent.

19. In a division of the epitheliomas according to cellular activity, on a basis of 1 to 4, Grade 1 represents 15.82 per cent.; Grade 2, 62.01 per cent.; Grade 3, 21.04 per cent. and Grade 4, 1.11 per cent.

20. The average duration of the lesion according to grade is longest in Grade 3, 3.33 years, and shortest in Grade 4, 1.29 years.

21. The average size of the lesion according to grade is largest in Grade 3, and smallest in Grade 1.

22. Of the patients operated on and traced, 40.52 per cent. are dead and 59.47 per cent. are alive.

23. Of the living patients 92.85 per cent. report a good result, having been free from disease on an average of 7.76 years.

24. Of the patients operated on who have died, concerning whom information has been received, 63.63 per cent. died from epithelioma.

25. Eight, or 1.55 per cent., of the patients who were operated on died in the clinic, while the actual operative mortality was only 0.77 per cent.

26. The users of tobacco who were operated on did not obtain quite so good total good results as the nontobacco users; 78.14 per cent. in the former, and 86 per cent. in the latter.

27. In the inoperable cases, the nontobacco users reached as high as 30.76 per cent.

28. The patients who were treated with pastes, plasters, etc., before entering the clinic did not get such good total results as those who were not so treated; 62.06 per cent. in the former and 77.08 per cent. in the latter; moreover, 31.91 per cent. of the former who were operated on had metastasis, while only 19.48 per cent. of the latter operated on had metastasis.

29. Of the patients with metastasis, 17.39 per cent. are living and 82.6 per cent are dead.

30. Of the living who had metastasis, 83.33 per cent. report a good result. In these patients the submaxillary lymph nodes on only one side were involved.

31. No patient with the cervical nodes or more than one group of any lymph nodes involved has been reported living.

32. Of the patients reported dead who had metastasis, 91.66 per cent. died from epithelioma.

33. If a patient has the submaxillary lymph nodes on one side only involved, he has a 1 to 3 chance of getting a good result, and will be living and well on an average of 6.18 years after operation.

34. Of the patients operated on in whom no metastasis was demonstrated 76.26 per cent. are living, and 23.73 per cent. are dead; of the living, 92.71 per cent. report a good result.

35. The average duration of the lesion in the patients with metastasis is 3.27 years, as compared with 2.40 years in those without metastasis; the average size of the lesion is 3.74 cm. in the patients with metastasis, as compared with 2.01 cm. in those without metastasis.

WAUGH, Chicago.

EARLY NERVOUS SYPHILIS AFTER ARSENOBENZENE. J. E. R. McDonagh, Brit. J. Dermat. & Syph. **32**:29 (Feb.) 1920.

In this article McDonagh expresses his views on phases of nervous syphilis, and some of these views, as usual with him, are original. Leaving out of consideration cases of true metallic central and peripheral neuritis, he puts the cases that he describes into two groups: (1) vascular cases and (2) meningeal cases. As all the patients had entered the generalization stage before treatment was commenced, no case in the primary stage having been encountered, we may reasonably assume that both the disease and treatment played a part in the nervous manifestations produced. Paresis of the facial nerve was the earliest manifestation. For various reasons it is impossible to be certain whether the lesion is primarily neuritic or primarily meningeal. Treatment should not be stopped; on the contrary, it should be energetically pursued. The paresis that appears in untreated syphilis is less common than paresis of the eighth and second nerves, and it responds more slowly to treatment.

Paresis of the eighth and second nerves was more common formerly than now. When it was the rule to prescribe only two injections of arsenobenzene the lesion, which was almost invariably meningeal in origin, occurred some weeks after the last injection, and was most prone to affect those patients with that well-known form of infiltrated papular rash which is so stubborn to treatment. Paresis of these two cranial nerves when encountered now generally signifies a widespread cerebrospinal meningitis. The paretic symptoms form, as a rule, only part of the picture presented, and appear most frequently between the twelfth and twenty-fourth week after the last injection of arsenobenzene. There may be a primary neuritis of the eighth and second cranial nerves, but the lesion is an extremely rare one.

Hemorrhagic encephalitis usually ends fatally on the third day following the second or third injection of arsenobenzene. The lesion, in the author's opinion, is of the nature of a reactionary inflammation caused by the death of the parasites. The sudden death of a large number of parasites brings about a liberation of toxin which damages the endothelial cells.

There is another form of hemorrhagic encephalitis, which may be designated as late, in contradistinction to the early form just described, which sets in between the first and fourth week after the last injection of arsenobenzene (six to nine injections). Its onset is sudden and invariably terminates fatally, usually within forty-eight hours.

The cause of late hemorrhagic encephalitis is, in the author's opinion, the toxic action of arsenic on the endothelial cells of the vessels attacked, plus, in some cases, a secondary cause which rendered the same a locus minoris resistentiae.

Cases of hemiplegia and paraplegia may be found occurring within a month of the last injection of arsenobenzene of a maximum course. They rarely end fatally. All these cases are, in McDonagh's opinion, due primarily to the toxic action of arsenic on the endothelium of the vessels.

The most important group of all contains the meningitis cases. Meningitis may be so acute as almost to cause sudden death, or it may give rise to signs and symptoms that are only discernible on the closest scrutiny of the patient, or it may only render the cerebrospinal fluid pathologic.

The meningitis is both cerebral and spinal, although the usual predominating symptoms draw more attention to the former; therefore in all cases it

is better to speak of the condition as cerebrospinal meningitis. There is, practically speaking, no nervous sign or symptom that may not be encountered in post-treatment syphilitic cerebrospinal meningitis, which makes a short description of the condition difficult. The three most important symptoms are: headache, insomnia and amnesia.

In most cases an examination of the blood is negative, pathologic changes being found in the cerebrospinal fluid only. The cell count may vary from 10 to 2,600 cells per c. mm. The albumin is increased and the globulin often may be. The complement-fixation test may be either positive or negative, according to the intensity and duration of the trouble.

In the prevention and treatment of these various conditions, McDonagh places great reliance on colloidal iodin; he also suggests other therapeutic measures.

SENEAR, Chicago.

IVY AND SUMAC POISONING. E. A. SWEET and C. V. GRANT, U. S. Pub. Health Rept. **35**:443 (Feb. 27) 1920.

Certain species of plants belonging to the rhus or sumac family exert a poisonous action on the skin of persons susceptible to their influence. Since these plants are widely distributed, the authors assert that from the standpoint of health alone more general information on the subject is desirable in order that the public may become better acquainted with the nature of the plants, methods by which they may be recognized and means of preventing toxic effects. A detailed description of poison ivy, poison oak and poison sumac is given. The differential points in identifying the leaves of each variety, the general character of the plants, their flowers and fruit, location and synonymous terms are described minutely.

Nature of the Poison—by Direct or Indirect Contact: The various toxic species of Rhus apparently cause skin irritation by the same toxic principle. The nature of this poison has long been studied; apparently it has now become established that it is an oily principle, called toxicodendrol, which can be extracted from the leaves, roots, flowers, green fruits and in fact from all parts of the plant with the possible exception of the pollen and ripe fruit. Experiments have shown that the most minute quantities of this oil can produce poisoning; consequently, contact of the body with the growth, however slight, may result in the transference to the skin of enough of the poisonous principle to exert its poisonous effects. Direct contact is not necessary as an intermediate object can transfer the poison to the skin; for example, clothing or farm implements which have brushed against the plants may, when handled later, cause poisoning. The possibility of contracting poisoning from horses, dogs or other animals that have come in contact with the plants should not be overlooked.

While there is reason to believe that the nonvolatile toxi-condendrol is the sole toxic principle concerned, it was formerly supposed that Rhus poisoning was caused by volatile emanations from the plants, and there is still much diversity of opinion concerning the matter. Numerous attempts to produce poisoning experimentally by emanations from Rhus plants and from the oil itself have been unsuccessful. On the other hand, there is excellent foundation for the popular belief that smoke from the burning plants will give rise to irritation, and some of the most serious cases of Rhus poisoning undoubtedly originate in this manner. Of course, there are varying degrees of susceptibility to the poison. It may be stated that when a large amount of toxin

is deposited on the skin and the person is markedly susceptible the reaction is severe; but if a small amount is deposited and the susceptibility is slight, the reaction is mild—in some cases unnoticeable. The authors discuss the symptoms in detail and state that on the whole the skin eruption resulting from Rhus poisoning does not differ materially from that caused by a number of other irritant poisons such as chemicals like mercuric chlorid, arsenic and certain anilin compounds contained in dyes. Identical effects are sometimes produced by urine, pus and other irritating bodily discharges. The seasonal prevalence of the inflammation, the history of exposure and the fact that Rhus poisoning is more common than that caused by other agents, give a clue to the character of the disturbance.

Much can be accomplished for the protection of persons who come in contact with Rhus vines, and also in preventing or lessening the disastrous effects following exposure. Toxic plants can usually be handled with impunity if rubber gloves are worn, provided none of the dust or irritating material comes in contact with the body. Care should be exercised in removing the gloves from the hands, as they will necessarily harbor the toxic material and any contact with the skin is apt to cause trouble. After the gloves have been removed they should be thoroughly washed with soap and water, rinsed several times and laid away. The water in which the infected gloves are washed will contain the poisoning principle; hence it may not be entirely innocuous. As clothing which has come in contact with the leaves may convey the infection for an indefinite period, garments should be changed after exposure, including shoes, which perhaps more often than any other article are a source of indirect contagion. The anointing of the parts to be exposed with cottonseed oil, olive oil or petrolatum is said to serve as a protection.

In the present state of knowledge of the subject it is believed that attempts to confer immunity by the ingestion of leaves or extracts of the plant should be undertaken only under the guidance of a physician. One of the surest and best methods of individual prophylaxis is the use of soap and hot water. It has been found that Rhus poison after being deposited on the skin requires a certain time for penetration, and if this penetration can be prevented, irritation and the resulting eruption will not occur. Hot water and soap act mechanically, and if judiciously used constitute by far not only the most serviceable preventive but also one of the best curative agents that we at present possess. The washing should be done as soon after exposure as possible. If considerable time has elapsed—that is, from twelve to twenty-four hours—this method should still be resorted to so that the portion of material that has not yet penetrated will be removed.

Treatment: Rest in bed in a cool room is essential to rapid recovery. For the eruption itself, scores of remedies, many of which are claimed by their advocates to possess distinctive virtues, if not specific qualities—have been recommended. In spite of these claims it is necessary to state that no specific treatment for Rhus poisoning is yet available.

WAUGH, Chicago.

EPIDEMIC ENCEPHALITIS. D. DENÉCHAU, Bull. méd. **34**:69 (Jan. 24) 1920.

The author has reviewed the records of forty-one cases of epidemic encephalitis, including a small number under his own observation. So much is being written on this subject that it is perhaps well in abstracting to be very brief and selective.

Denéchau considers first the major symptoms: (1) lethargy (hypersomnia), (2) the ocular paralyses, and (3) the infectious state (evidenced by fever, etc.). Regarding the paralysis he quotes Lhermitte, with whom he agrees, that the ocular paralyses are "partial, dissociated, extensoprogressive and sometimes migratory." The third nerve involvement almost always gives an ophthalmoplegia (partial) externa; however, through internal musculature involvement in one case there were unequal pupils; in another bilateral mydriasis, and in a third that dissociation which is a direct inversion of the Argyll Robertson pupil, namely, abolition of the reflex of accommodation and retention of the light reflex, such an inverse Argyll Robertson as has been seen in botulism and the paralysis of diphtheria.

Of twenty-two cases which were quite fully observed, only six showed seventh nerve involvement. In only one was a hemiplegia noted, though in four other cases the plantar reflex on one side was extension. The writer mentions the occasional implication of the last four cranial nerves. Nor does he omit the features which partake of the Parkinsonian syndrome, including rigidity. Tremor (noted in a third of the cases) has not always been Parkinsonian, but often choreiform or choreo-athetoid. He comments especially on the absence of stiffness of the neck and absence of a Kernig sign. Convulsions were present in one case and sphincteric troubles in thirteen (incontinence in eight and retention in five). He considers sensory changes debatable though trophic and vasomotor phenomena are not unusual. He has seen a certain degree of mental confusion in some cases, also a delirium with marked disorientation. In another affectivity was markedly abnormal and a catatonia, which the patient showed, was attributed to it. The writer has apparently encountered no cases with radicular symptoms and therefore was saved the quagmires of terminology which are now in sight.

No spinal fluid cell counts are recorded. But Denéchau found no increase and he speaks of "the integrity of the spinal fluid."

His brief account of the pathology, as well as speculations regarding the etiology, including the relationship, if any, to influenza, bring out nothing new. He outlines the differential diagnosis between epidemic encephalitis and syphilis, botulism, influenza (with edematous changes in nerve centers), poliomyelitis, and hemorrhagic superior polioencephalitis of Gayet and Wernike. In botulism, the points of interest are the occurrence of several cases at the same time in persons under the same régime, the presence of great thirst and dryness of the mouth and the absence of somnolence. In influenza the symptoms are more abrupt in onset and termination, there is no especial election of the nerve centers of the mesencephalon; the ophthalmoplegia, therefore, is often lacking and pulmonary complications are the rule. Polioencephalitis (superior hemorrhagic) of Gayet and Wernike occurs in alcoholics and is always accompanied by an active delirium and remains afebrile.

DAVIS, New York.

HEMOLYTIC ACTIVITY OF SOLUTIONS OF ARSPHENAMIN AND NEO-ARSPHENAMIN. JOHN A. KOLMER and ELIZABETH M. YAGLE, J. A. M. A. **74**:643 (March 6) 1920.

This is a valuable and interesting report of experiments performed by the authors. A detailed description of the work is given. The conclusions are:

1. All solutions of arsphenamin are hemolytic owing primarily to the direct hemolytic activity of arsphenamin.

2. Solutions of arsphenamin in isotonic saline solution are from three to ten times less hemolytic than solutions in water.

3. The hemolytic activity of solutions of arsphenamin in water and isotonic saline is unavoidably increased by the addition of sodium hydroxid for purposes of neutralization; the addition of an excess of alkali increases hemolytic activity.

4. Concentrated solutions of arsphenamin in water and isotonic saline are more hemolytic than dilute solutions.

5. Neo-arsphenamin is not hemolytic.

6. Dilute solutions of neo-arsphenamin in water, as 0.9 gm. in 90 c.c. or more of water, are hemolytic, owing to hypotonicity of the solution. Concentrated solutions, as 0.9 gm. in 30 c.c. or less of water, are not hemolytic, owing to the presence of sufficient inorganic salts from the drug to render the solution approximately isotonic.

7. To avoid hemolysis in the administration of dilute solutions of neo-arsphenamin, sterile physiologic sodium chlorid solution prepared of freshly distilled water should be used; when the concentrated solutions are administered (each 0.1 gm. dissolved in 3 c.c. or less), sterile distilled water may be employed.

8. The degree of hemolysis produced by the administration of arsphenamin may be lessened (*a*) by using instead of water sterile saline solutions of such strength as to render the solutions isotonic; (*b*) by avoiding the administration of concentrated solutions; (*c*) by carefully neutralizing and "clearing" the solution with sodium hydroxid, counting the drops or otherwise measuring the amount necessary, and adding not more than a fifth of this amount in excess, and (*d*) by giving the injections slowly so as to permit gradual mixing and dilution of the solution with the blood.

WAUGH, Chicago.

DIE BEHANDLUNG DER BARTFLECHTE. MAX MICHAEL, Therap. d. Gegenw. **60**:373 (Oct.) 1919.

In the first part of this article the author tells us how much more clever the Germans are than other Europeans in handling cases of this disorder. Two types of trichophytosis are recognized. These are distinguished clinically as well as biologically.

Trichophitic fungi of different botanical subspecies produce distinct clinical diseases. The successful treatment likewise varies. One clinical type is chronic, not severe, refractory to treatment, and is of animal origin. There may be folliculitis, perifolliculitis or an invasion of the cutaneous or subcutaneous tissues. This type is caused by the endothrix. The other clinical type is highly infectious, is acute and responds readily to treatment. This is caused by the ectothrix.

The author discusses the various methods of treatment with: sublimate, dilute carbolic, liquor formaldehydi, sagrotan, iodin, chrysarobin, traumatacine, salicylic, epicarin, red sulphur salve, naphthol-resorcin salve, cignolin, etc. Treatment by a vaccine made from a laboratory culture of the fungus is discussed at greater length. As a diagnostic measure by intracutaneous injection the vaccine is probably of no value. Many cases, however, have been successfully treated by vaccines. Highly favorable results have been reported following the cutaneous injection of turpentine oil and terebenthine. But "the fact is, that in most of the cases of the large lumped form a speedy healing

is brought about while in the other types the favorable results reported by Klingmüller, Franz Zaver Müller, Schedler and other authors are not to be observed."

The author concludes that in obstinate and deep seated affections treatment with roentgen rays is the method of choice. In the more severe cases two or three erythematous doses filtered through 1 to 4 mm. aluminum are advised.

ELBERT CLARK, Chicago.

AGREEMENT IN RESULTS OF THE WASSERMANN REACTION. HARRY C. SOLOMON, J. A. M. A. **74**:788 (March 20) 1920.

This comprises a report and study of tests performed by two laboratories in 3,000 hospital admissions. The two laboratories selected for the work were the laboratory of the Massachusetts Department of Health and the laboratory of the Boston City Department of Health. Three cholesterinized antigens were used by one laboratory and one cholesterinized and an acetone insoluble antigen by the other laboratory.

Summary: The blood serums of 3,000 patients were subjected to the Wassermann tests by two independent laboratories. An analysis of the results showed that there was complete uniformity in the findings of the laboratories in 93.44 per cent. The 6.56 per cent. variation included cases reported as doubtful. Considering only the variation of cases reported positive by one laboratory and negative by the other, the percentage variation was 4. This was 1.4 per cent. positive in one laboratory and 2.6 per cent. positive in the other laboratory. Some of the cases reported positive by one laboratory and negative by the other were known to be syphilitic, so that the negative reaction was the incorrect one. Considering, then, the cases that either laboratory may have reported as positive in nonsyphilitic cases, the percentage was 3.16. This is probably a higher percentage for false positives than actually occurred, as some of these cases were presumably syphilitic. This percentage variation is based on only one test. Repetitions resulted in a uniformity of findings in the majority of cases. This is considered a good testimonial for the accuracy of the tests as performed in these two laboratories.

WAUGH, Chicago.

DES ICTERES OBSERVES AU COURS DU TRAITMENT PAR LES NOVARSENICAUX ORGANIQUES. J. HAGUENAU and C. KUDELSKI, Gaz. d. hôp. **93**:245 (Feb. 14) 1920.

Haguenau and Kudelski review the subject of the development of icterus during arsphenamin treatment, and find that this condition is being noticed with increasing frequency, but that it is nevertheless a rather rare complication. Neo-arsphenamin produces icterus more frequently than does arsphenamin, and some series of the former appear to be particularly active in this respect.

Icterus may occur after the first injections, or several months after treatment has been stopped. It is almost always seen in patients with recently acquired syphilis, but may be seen in old cases, and even in nonsyphilitic cases. It is also seen in patients in whom the liver has previously shown no sign of disease and in those who have previously had liver disease.

The cases may be divided into two main groups: those occurring at the beginning of arsenical treatment, and those seen at the end of treatment and

some weeks or months after treatment or as the authors designate them, precocious and tardy icterus.

The clinical aspects of the two types are considered in detail, and after a careful study of the pathogenesis the authors conclude that no one factor is responsible for all cases. Dividing the cases into two groups according to the stage of the syphilis, they find that in cases of early syphilis treated with arsenical products, the etiologic factors may be: (1) hepatosyphilis (Herxheimer reaction or a hepatorécidive)—usually the precocious type, (2) catarrhal toxi-infectious icterus, secondary to arsenical gastro-enteritis—rare, (3) toxic arsenical icterus—rare, and (4) coincidental icterus (from lithiasis, etc)—exceptional.

In cases of tertiary syphilis, "parasyphilis" or nonsyphilitic conditions treated with arsenicals we have the last three causes enumerated above, the toxic arsenical form usually occurring as the late variety.

SENEAR, Chicago.

VARICELLEN UND HERPES ZOSTER. PROF. E. FEER, Schweiz. med. Wchnschr. **50**:41 (Jan. 15) 1920.

Feer discusses the relationship of varicella to herpes zoster. He reports four interrelated cases. The first patient had typical varicella. The second patient, a contact of the first, developed typical herpes zoster fourteen days later. Patients 3 and 4, contacts of Patient 2, developed typical varicella seventeen and twenty days, respectively, after the beginning of the herpes zoster in Patient 2. Patients 3 and 4 had not been exposed to varicella recently.

The herpes zoster covered almost the entire right half of the breast and was sharply demarcated. Lesions were not seen elsewhere. During the height of the attack, there was a fever of 38.4 C. (101.1 F.) and a distinct leukopenia. It could not be determined whether Patient 2 had ever previously had varicella.

In the literature Bokay reports a series of thirteen cases (twelve of his own—collected over a period of thirty years) in which the patients separately contracted varicella after exposure to herpes zoster. Henoch and Thomas had previously noted that varicella may present a zoster-like grouping. Tenneson described cases of herpes zoster in which there were also present vesicles scattered over the various parts of the body. Feer thus believes that in his series the case of typical herpes zoster was an aberrant type of varicella and etiologically was the cause of the two succeeding cases of typical varicella; in other words, that the herpes zoster was a true case of varicella. In Bokay's cases, herpes zoster was the infecting agent for varicella. In Feer's cases, herpes zoster was the intermediary infecting agent between varicella and varicella. In the light of these observations the so-called epidemics of herpes zoster are easier to understand.

ELBERT CLARK, Chicago.

GENERAL PROGNOSIS OF SYPHILIS IN THE LIGHT OF RECENT PROGRESS. SIGMUND POLLITZER, J. A. M. A. **74**:775 (March 20) 1920.

According to Sigmund Pollitzer, there is no factor in the prognosis of syphilis that is comparable in importance with early and energetic treatment. Syphilis that has been generalized in the system, that has infected every organ and tissue, that in the course of years has induced sclerotic changes in important structures, presents an entirely different prospect of cure from the disease in its incipience. The treatment of syphilis by the vigorous exhibition

of arsphenamin in its primary stage, while the disease is still largely a local infection and before the organisms have acted long enough on the tissues even to provoke the development of a positive Wassermann reaction, results in the immediate cure of the disease in practically every case. The prognosis of a properly treated case of syphilis is at its best in its primary stage. The prognosis has been immeasurably improved by the discovery of the spirochete. The second great achievement of recent years is the application of the Bordet-Gengou method of complement fixation to syphilis—the Wassermann test. The third achievement is the employment of the organic arsenic compounds to which the name arsphenamin has been officially assigned. Recent additions to our knowledge have made it possible to attack the disease by prophylaxis at the moment of infection; to make an infallible diagnosis before the system is swarming with spirochetes; to recognize the necessity for further treatment even in the absence of symptoms; to detect the disease in the central nervous system before clinical symptoms are manifest, and finally, in arsphenamin, have given us a remedy incomparably superior to mercury in speed of action as well as in efficacy. It is inconceivable that the next generation will not reap the benefit of the improved prognosis of syphilis.

WAUGH, Chicago.

SYPHILIS OF THE BLADDER. LOYD THOMPSON, Am. J. Syphilis **4**:50 (Jan.) 1920.

The literature on this subject is exceedingly scant and most of it has been supplied by American writers. The author reviews, with critical comment, all case records found in the literature. He considers the earlier reports lacking in conclusive evidence of bladder syphilis, the earliest acceptable report being that of Fallin in 1849. Many of the cases reported since that time have also shown a lack of evidence to warrant the diagnosis. There are now only fifty-eight undoubted cases on record, including the author's case, a report of which accompanies the article.

The average time of bladder involvement following original infection in the recorded cases was sixteen years. The majority of cases occurred between the ages of 20 and 50 years, almost twice as many occurring in males as in females.

The author concludes:

1. Only eighty-four cases purporting to be syphilis of the bladder have been recorded in the literature, and of these only fifty-eight are accepted as authentic.

2. Syphilis of the bladder is not so rare as the comparatively meager literature on the subject would seem to indicate.

3. Bladder syphilis would probably be more frequently recognized if looked for more frequently.

4. All cases of hematuria and pollakiuria should be looked on with suspicion until found to be of other than syphilitic etiology.

5. There is nothing characteristic either in the symptomatology or the cystoscopic picture of bladder syphilis, so the diagnosis must rest on other evidence.

TOMLINSON, Omaha.

SYPHILIS OF THE GREAT VESSELS. A. F. Tyler, Am. J. Syphilis **4**:38 (Jan.) 1920.

Practically all aneurysms are due to syphilis. The majority occur in men, and the most frequent age incidence is the fourth and fifth decades.

The symptoms, physical findings, and differential diagnosis are given. Special attention is given to the roentgen-ray findings.

Rest, restricted diet and forced anti-syphilitic treatment constitute the essentials of treatment.

Tomlinson, Omaha.

MULTIPLE XANTHOMA IN A BOY. H. G. Adamson, Proc. Roy. Soc. Med. **13**:23 (Dec.) 1919.

The entire trunk was involved with small reddish-yellow plaques, which when microscopically examined proved to be xanthoma.

Guy, Pittsburgh.

CASE OF LINEAR MORPHEA. J. L. Bunch, Proc. Roy. Soc. Med. **13**: 24 (Dec.) 1919.

This was a case of linear morphea, or scleroderma, beginning at the outer margin of the right orbit and extending backward. A similar condition was beginning to appear on the other side. The condition began nine months after the patient was wounded in the left hand.

Guy, Pittsburgh.

ACUTE GLANDERS IN MAN. T. Hunter, Lancet **198**:316 (Feb. 7) 1920

The patient was a veterinary officer doing laboratory work, and the disease was of a severe type. The article contains nothing new of special importance.

Waugh, Chicago.

GUMMA OF THE BREAST. Loyd Thompson, J. A. M. A. **74**:791 (March 20) 1920.

In this interesting case report of a probable gumma of the breast the diagnosis was based on these points: history of syphilis in the husband, two miscarriages, positive Wassermann test, presence of a tumor in left breast for one year, the growth being 4 inches long and from 1 to 1½ inches in diameter; the tumor was not tender and the regional glands were not involved. There was marked reduction in the size after antisyphilitic treatment.

Waugh, Chicago.

CASE OF SHAVING-BRUSH ANTHRAX OF THE FACE; RECOVERY. George Pernet, Proc. Roy. Soc. Med. **13**:25 (Dec.) 1919.

The condition proved to be a case of shaving-brush anthrax. The patient made an uninterrupted recovery under mild antiseptic applications.

Guy, Pittsburgh.

NEVUS OF LOWER LIP AND LYMPHANGIOMA OF TONGUE. B. W. Howell, Brit. J. Child. Dis. **16**:213 (Oct.-Dec.) 1919.

Howell reports a child of 6 years with nevus of the lower lip involving the mucous membrane of the gum, which bled occasionally. At the age of 3 the swelling was noticed on the posterior aspect of the tongue; it gradually grew forward, becoming stationary only when the tongue almost filled the mouth. Vesicles formed on the tumor and continually broke leaving painful ulceration. Occasionally the tongue became unusually enlarged and protruded from the mouth, and was then excessively painful. There was no history of similar conditions in the family and no history of syphilis in the patient.

Pusey, Chicago.

A SIMPLE TREATMENT OF RINGWORM OF THE NAILS. Craik, Brit. M. J. **2**:185 (Feb.) 1920.

The author reports two cases of onychomycosis treated and cured. Both occurred in women of middle age; a thumbnail of one was affected, a fingernail of the other. The fungus was found in scrapings, but no cultures were made.

The disease had existed for months in one, for years in the other. They were given a lotion of salicylic acid, 1 dram in 1½ ounces of methylated spirit, to be painted on after scraping every night, and without scraping every morning.

This was used for three months and longer. Both have been cured for twelve months.

Oliver, Chicago.

THE ACTION OF ULTRAVIOLET RAYS ON BLOOD SERUM, LEUKOCYTES AND BACTERIA. D. Sirec, Sperimentale **73**:253 (Feb.) 1920.

From his interesting experiments the author reaches the following conclusions:

1. The ultraviolet rays produce a marked reduction of the phagocytic properties of the blood.

2. This reduction is almost exclusively due to the paralyzing action of the rays on the phagocytes.

3. The ultraviolet rays exert no action whatever on the opsonic index of the serum.

4. The ultraviolet rays probably act on bacteria in such a way as to produce their complete destruction by leukocytosis in greater proportion than in normal conditions.

Pardo-Castello, Havana.

FAMILIAL LEUKONYCHIA AND LEUKODERMA. H. C. Samuel, Brit. J. Child. Dis. **16**:217 (Oct.-Dec.) 1919.

Samuel reports the case of a boy, aged 6, whose nails showed spots of leukonychia. In addition, in the left lower costal and lumbar regions there was a large patch of melanodermia in which there were spots of leukodermia

arranged in lines. The elder brother showed leukonychia striata on several fingernails. The father had recently developed leukodermia and melanodermia at the angle of the lower jaw and leukonychia of his fingers. The father's brother showed leukonychia striata of all his fingernails.

PUSEY, Chicago.

UNUSUALLY LARGE PRIMARY EPITHELIOMA OF THE OCULAR CONJUNCTIVA. CLARENCE A. VESSEY, M.D., Am. J. Ophth. **3**:113 (Feb.) 1920.

A primary epithelioma of the ocular conjunctiva is described: "The growth measured 1⅜ inches transversely by 1¼ inches vertically." There was no severe pain, but profuse mucopurulent discharge. An excellent pathologic report by Allen J. Smith, professor of pathology, University of Pennsylvania, is incorporated; this report forms the most valuable part of the article. Professor Smith considers the tumor malignant. Complete bibliographic reference is appended.

ELBERT CLARK, Chicago.

A CASE ILLUSTRATING THE VALUE OF RADIUM IN THE TREATMENT OF VERRUCAE PLANAE. DOUGLASS W. MONTGOMERY and GEORGE D. CULVER, Urol. & Cutan Rev. **24**:102 (Feb.) 1920.

The authors report a case of verrucae planae which disappeared rapidly after an exposure to radium after all other measures had failed. Eleven milligrams of radium, screened with two thicknesses of paper, were applied for fifteen minutes.

LEVIN, New York.

TERTIARY SYPHILIS OF THE LIVER. H. L. CARRETTI, Pres. méd. Argentina, Buenos Aires **6**:203 (Dec. 20) 1919.

Carretti describes the various clinical pictures produced by late syphilis in the liver and deducts therefrom that syphilis of the liver, either inherited or acquired, may produce the symptoms of all known types of disease of the liver and of diseases of the organs in its vicinity. He believes that specific treatment should be undertaken in all cases of disease of the liver in which there is any reason to suspect syphilis, and also in all cases of cancer of the liver even where nothing suggests syphilis.

PUSEY, Chicago.

REMARKS ON SCLERODERMIA. F. H. BARENDT, Brit. M. J. **1**:44 (Jan. 10) 1920.

Barendt, in presenting two cases of sclerodermia before a society, discusses some of the characteristics of the disease. He recalls the various names that have been successively used for the condition, and justifies his use of the ending "ia" by stating that it implies a definite disease of the skin, and not merely a change in the structure and texture. The source of the confusion of names in Alibert's keloid and Addison's keloid (morphea) is also traced.

The remainder of the paper merely relates the usual clinical and histopathologic picture of the disease, and emphasizes the failure of all therapeutic measures.

SENEAR, Chicago.

THE RELATION OF INBREEDING TO TUMOR PRODUCTION. STUDIES IN THE INCIDENCE AND INHERITABILITY OF SPONTANEOUS TUMORS IN MICE. MAUD SLYE, J. Cancer Res. **5**:53 (Jan.) 1920.

This investigator concludes that inbreeding is not an influence in the increase or the incidence of cancer, but that it tends to eliminate cancer by eliminating the strain, whereas hybridization increases cancer by increasing the output of cancer progeny.

A further conclusion is that cancers can be eliminated by persistently mating persons of cancerous ancestry with persons of noncancer ancestry.

H. R. FOERSTER, Milwaukee.

SYPHILITIC AORTIC INSUFFICIENCY. J. C. MEAKINS, Canad. M. A. J. **10**:179 (Feb.) 1920.

Meakins reports the case of a man, aged 47, who on admission to the hospital in February for influenza, was found to be affected also with well developed syphilitic aortic insufficiency. The symptoms and physical signs were characteristic and distinct. Under specific treatment all evidence of cardiac lesion had disappeared in three months, although the Wassermann reaction remained positive.

SENEAR, Chicago.

PERSISTENT SALVARSAN EXANTHEMA. DORA FUCHS, Deutsch. med. Wchnschr. **45**:1276 (Nov. 13) 1919.

Fuchs reports the case of a patient who repeatedly after injection of arsphenamin or neoarsphenamin developed reddening of the bulbar and palpebral conjunctiva and lacrimation. In some instances it failed to occur when a preliminary injection of epinephrin was given, and in others was promptly relieved by an injection of the same solution.

SENEAR, Chicago.

THE TECHNIC IN THE RADIUM TREATMENT OF KELOID AND OTHER COMMON SKIN LESIONS. ROBERT TAFT, Urol. & Cutan. Rev. **24**:73 (Feb.) 1920.

The writer advocates the employment of filtered rays in all superficial skin conditions.

LEVIN, New York.

Society Transactions

NEW YORK ACADEMY OF MEDICINE, SECTION ON DERMATOLOGY AND SYPHILIS

Regular Meeting, Jan. 6, 1920

JOHN E. LANE, M.D., *Chairman*

CHRONIC ERYTHEMA OF FACE (For Diagnosis). Presented by DR. W. B. TRIMBLE.

A clerical worker, aged 27, stated that for the past five years she had had trouble with her face. She had not been subject to constipation, but had had attacks of indigestion with abdominal pain about once every few weeks. The skin of the face showed a dull red blush, permanent and evidently due to passive venous congestion, with some dilated venules. There was no scaling, itching or papules.

Dr. Trimble, replying to an inquiry as to the cause of the abdominal pains, said the patient merely stated that she sometimes had these attacks of abdominal pain. If she continued to come to the clinic, she would be referred to the internist, who would endeavor to find out the cause of the trouble.

ULCERATING SCARRING OF THE CHEEK (For Diagnosis). (Previously presented before the New York Dermatological Society.) Presented by DR. W. B. TRIMBLE.

A girl, aged 6, born in this country, according to the parents, when 1 year old had an eruption scattered over the whole body, all of which disappeared in a short time, with the exception of the face lesion. This lesion remained and slowly increased in size up to the present time. It was irregular in outline and thickened, and on close scrutiny was seemingly verrucous in character. Several small, superficial atrophied spots could be made out in the healthy skin close to the border of the lesion. There were also several small papular lesions of indeterminate character on the left buttock. The possibility of these lesions being tuberculous was taken into consideration.

DISCUSSION

DR. W. J. HIGHMAN said that the case had been presented before another society with the diagnosis of probable tuberculosis, and he had at that time suggested that it might be in either the pseudopelade group or, as corollary to that fact, possibly a lupus erythematosus. The evidence on the face seemed to bear out the diagnosis, and he agreed with Dr. Trimble's revised views.

DR. W. B. TRIMBLE, referring to Dr. Highman's remarks about lupus erythematosus, said that the only disturbing point about that diagnosis was that at first the lesion unquestionably appeared to be ulcerated, and lupus erythematosus is not supposed to ulcerate. This ulceration, however, might have been due to a secondary infection that had cleared up under the application of the ointment.

ADENOMA SEBACEUM. Presented by Dr. J. J. Rothwell.

A young man, aged 21, born in the United States, although the cheeks were quite red from the time of birth, had no actual lesions until he was 3 years of age, making the duration eighteen years. The case was typical. Great numbers of thickly set, hard warty light colored lesions, pinhead in size, were scattered over the cheeks, chin and sides of the nose, interspersed with telangiectases, making the usual clinical picture. The inflammatory areas seen about the chin were due to the Kromayer light.

COLLOID MILIUM. Presented by Dr. W. B. Trimble.

A man, aged 58, born in the United States, had recently been shown at a previous meeting of the Section. The duration of the condition was two years. The patient first noticed a small papule somewhat lighter than the normal skin, situated on the left side of the nose. Others gradually appeared, and after a time lesions appeared on the right side. The left side was always the more extensively affected. The condition exhibited consisted of a group of small yellowish-white papules, lighter than the normal skin in color, with a translucent appearance. The whole group made a lesion about the size of a five-cent piece. A biopsy demonstrated the case to be one of colloid degeneration, as the section showed the peculiar connective tissue degeneration observed in that disease.

DISCUSSION

Dr. L. W. Ketron, Baltimore, concurred in the diagnosis of colloid degeneration. There were several clinical forms that this type of degeneration might assume on the skin. A clear elucidation of the various forms of degeneration was difficult, and the general pathologist did not help much in differentiating them. Inspection of the section of this case, however, showed undoubtedly that it was a case of colloid degeneration, but it was not typical clinically of Wagner's colloid milium. One patient whom he had studied had a tumor of the same character on the ear. It differed from this one, however, in that it was studded with pinhead sized, translucent areas resembling vesicles. When these were opened the degenerated material could be easily enucleated. It resembled jelly in consistency.

Dr. W. B. Trimble said he was glad to have Dr. Ketron agree with the diagnosis. There was some opposition to it when the case had been previously presented, and there was some question about colloid milium being aggregated, not disseminated, lesions. Dr. Ketron had confirmed his claim that sometimes the lesions coalesce and form such a type of degeneration.

MELANOMA. Presented by Dr. W. B. Trimble.

The patient, from the University and Bellevue Clinic, a white man, aged 47, of German birth, a baker, exhibited on the left temporal region, just beyond the outer angle of the eye, an unevenly elevated and irregularly outlined dark-brown or slate-colored, rather soft lesion about the size of a five-cent piece. Twenty-five years before he had been burned on the face with exploding gunpowder, which left at the above location a black spot the size of a pea. This lesion remained quiescent until June, 1919, when it began to grow or enlarge and become more elevated. There had been no pain, and only slight itching at times.

CASE FOR DIAGNOSIS. Presented by Drs. O. L. Levin and A. J. Gilmour.

A boy, aged 4, was first seen in the afternoon of the day of meeting. The father and mother stated that the condition on the scalp had been present for two years and only once, a year before, had the hair been cut. The hair of the head was said to grow until it was about half an inch in length, when it broke off. The boy was the third of four children; the two elder did not show the condition, but the youngest, a girl of 2, had a similar condition. The hair of the scalp appeared as if it had been cut by clippers in the hand of an amateur. Arranged concentrically around the scalp, were five polygons formed by the broken or cut hair. These increased in size with the dimension of the skull, being small at the vertex and larger toward the base. The younger child—who was also presented—showed a similar but less marked condition.

DISCUSSION

Dr. C. M. Williams said he would like to have the child isolated from the parents and from all other children for two months. He believed a normal growth of hair would then be seen.

Dr. S. Pollitzer said there was no question at all about the diagnosis—the lesions of the hair were produced by scissors. Possibly one of the older children performed this operation on the younger ones. It seemed to him, however, that the mother of the children was of a distinctly neuropathic or psychopathic type and she might herself be the causal agent in her children's peculiar trichosis.

Dr. B. Lapowski asked whether any microscopic examination had been made, and was answered in the negative.

Dr. W. J. Highman said the condition was beginning to appear on the younger infant now. It seemed to be a case of hysterical mutilation once removed.

Dr. A. J. Gilmour remarked that there were two older children in the family, one about 8, the other a little younger. In his opinion they or some one else had cut the child's hair in this bizarre fashion.

GUMMAS OF TONGUE: EPITHELIOMATOUS DEGENERATION. Presented by Dr. C. M. Williams.

T. G., a man, 60 years of age, stated that he had had a penile sore thirty-five years ago. There was no history of secondary sores. About five months ago he noticed a sore on the top of the tongue, and later other sores and lumps developed. As presented, the tongue was studded with nodules, some of which had ulcerated. The glands under and behind the ramus of the left jaw were enlarged.

Dr. Williams said that the patient was first seen the day before and there had not been much time to study the case, but it appeared to be a gumma and perhaps an epitheliomatous degeneration also.

DISCUSSION

Dr. B. Lapowski inquired in regard to the plan of treatment proposed and said that when he had presented a similar case not long before he had been told he had not treated it correctly.

Dr. F. Wise said that this patient had come to Mount Sinai Hospital some three weeks before and must have had antisyphilitic treatment since, judging from the improvement in the condition as presented.

Dr. J. F. Fraser said he had thought Dr. Williams had been informed of the result of the Wassermann reaction, which was +++, with cholesterin antigen + and with alcoholic.

NECROTIC GRANULOMA. Presented by Dr. W. B. Trimble.

The patient was a man, aged 62, born in the United States. For six years small papules had continued to come and go, always confined to the nose. These lesions necrotized in the center and went through a stage of retrogression, leaving punctate scars. The Wassermann reaction was negative.

DISCUSSION

Dr. C. M. Williams said that seeing the patient on presentation and also at the clinic, he had not been able to detect any of the firm nodules one expects in granuloma; the whole process seemed to be superficial. He had seen a number of cases of beginning rhinophyma or severe rosacea in which the scarring was a more important feature, and he was inclined to consider this one of those peculiar cases of rosacea with a good deal of atrophy and not much granulation.

Dr. P. E. Bechet remarked that the typical punched-out, variola-like scars of acne varioliformis were present. Some of the active lesions had necrotic centers. At the temples were a few varioliform scars, with here and there an active lesion. He considered the diagnosis of acne varioliformis the correct one, and thought that probably Dr. Trimble had that condition in mind when he called it necrotic granuloma.

Dr. S. Pollitzer disagreed with the diagnosis and said that the man had stated that the process began on the temporal region a few years ago and spread downward on the cheeks. The only unusual feature was the close aggregation of the scars on the nose; that was unusual in acne varioliformis. Otherwise the condition was quite typical of acne varioliformis which was not a tuberculid.

Dr. B. Lapowski said that he saw no difference between acne necrotica and tuberculid.

Dr. F. Wise stated that when Dr. Trimble had said necrotic granuloma he (Dr. Wise) understood him to mean acne varioliformis, a disease not due to infection with the tubercle bacillus. Acne varioliformis, the disease presented by this patient, was an infection with the staphylococcus organism, while necrotic granuloma was a true tuberculid.

Dr. W. B. Trimble said that, like Dr. Lapowski, he understood acne necrotica and necrotic granuloma to be the same. Many of these various terms could be grouped under the term necrotic granuloma. In other words, he considered the case one of papulonecrotic tuberculid. Grouping many of these terms would naturally encounter some opposition, and the point raised by Dr. Wise in regard to acne varioliformis being a staphylococcic infection was a point in question. He himself was inclined to believe that acne varioliformis was also a tuberculid.

SYPHILITIC REINFECTION. Presented by Dr. C. M. Williams.

M. G., a man, aged 27, when first seen on Aug. 9, 1916, gave a history of having had a penile sore eight months before, for which he had been treated with about twenty injections of mercury. When first seen, he complained of headaches and pains in the extremities, and showed extensive mucous patches on both tonsils. The Wassermann reaction was ++++.

The treatment consisted of neo-arsphenamin, 0.9 gm., given Aug. 11 and Nov. 3, 10, 17 and 24, 1916; arsenobenzol 0.9 gm., July 6, and 0.6 gm. July 20 and Aug. 3, 1917; arsphenamin 0.6 gm., March 1, 8, 15 and 22, 1918—together with mercury in the form of intramuscular injections of the salicylate, and mixed treatment internally throughout the course. The patient was a sailor and therefore treatment was irregular. After the first test the Wassermann reaction varied from negative to +, except that on Feb. 18, 1918, it was ++. On Sept. 4, 1918, it was negative, and three tests made in the army between September and December, 1918, were said to be negative.

On Nov. 19, 1919, the patient returned with a penile sore of four weeks' duration. The border was firm and the base indurated; the inguinal glands were enlarged. The Wassermann reaction was negative on that day and also on December 3. Dark field examination on November 14 showed no spirochetes, presumably on account of the use of an antiseptic dressing. Microscopic examination on December 12 showed both *Spirocheta pallida* and the Ducrey bacillus.

There were two ways in which to account for the condition presented by this patient. First, it might be considered a reinfection—and this he believed was the correct explanation. The only objection to this view was the experience of centuries that such reinfection does not occur. But the treatment now is much more efficient than formerly, and there was a constantly increasing number of reports of such cases. Second, it might be considered an ulcerated gumma, and there was no way of disproving that assumption, because spirochetes did occur in gummatous tissue although they were very rare; the Wassermann reaction was sometimes negative in the tertiary period, and local adenopathy might occur. Nevertheless, the concurrence of all these conditions after a suspicious intercourse was, in Dr. Williams' opinion, more probably due to a reinfection.

DISCUSSION

Dr. J. F. Fraser said there were very few at present who did not believe that the occurrence of reinfection with the syphilitic organism was probable. At the same time, it should be remembered that there were those who took the ground that there is no such thing as an absolute cure of syphilis, and consequently no reinfection. Warthin of Ann Arbor takes this ground and supports the contention by reporting numerous cases with a negative clinical history and a negative Wassermann reaction over long periods, in which, after they came to necropsy, he found spirochetes living in symbiosis within the tissues. In the case just presented, the history of exposure after a period of apparent cure and the development of the lesion after such an exposure at the end of the proper length of time—the lesion presenting all the marks of an initial sore—and the fact that spirochetes were demonstrated in the lesion, lent strong support to the view that in this instance the man obtained the spirochetes from an external source rather than from any storehouse of latent spirochetes within his tissues. Considering these facts, he was inclined to say that Dr. Williams' case should be recorded as one of genuine reinfection. Dr. Williams had referred to the impossibility of proving that claim mathematically, but how many things in medicine could be so proved?

Dr. E. W. Abramowitz said that Dr. Williams had brought out a very important point—that sometimes it was impossible to tell whether or not it was a case of reinfection.

He then cited a case in which a patient contracted an infection about July and came under observation in September with a chancre, a macular rash and a ++++ Wassermann. He received 3.2 gm. of arsphenamin in six weeks and 1 gm. of mercury salicylate in fifteen weeks. The lesions disappeared and his Wassermann reaction became negative. He was told to report again in two months for further treatment; but he came back in two weeks after his Wassermann reaction became negative and stated that he had had an exposure a month before. He showed a papule on his lip, mucous patches in his mouth, large papules on his body and a large papule on his penis which might have been called a chancre if the other lesions had not been present. His Wassermann reaction was ++++. Had not this patient's history been known, had he not been under personal observation and treatment, and had he not given such an intelligent history, this might have been considered a case of reinfection. Furthermore, he was receiving arsphenamin, and in spite of that fact papular lesions were appearing on his body.

Dr. W. J. Highman said that a further point in favor of Dr. Williams' attitude lay in the fact of the patient's inguinal adenopathy. Had it been a gumma, glandular enlargements would not have been striking, if they appeared at all. The case cited by Dr. Abramowitz rather complicated the issue and threw no light on the discussion. The period between the infection and the syndrome reported was too short to permit of reinfection; it seemed to be a delayed secondary rash. It was not uncommon to find a reappearance of a disseminated rash, with or without treatment, so that this case could hardly be called a reinfection but rather a late secondary manifestation due to the first infection.

Dr. M. Scheer asked whether the inguinal adenitis might not have been due to the Ducrey bacillus and might not the inguinal adenopathy be considered as a specific feature of the lesion.

Dr. C. M. Williams said he had nothing to add except that the Ducrey bacillus was reported

Dr. B. Lapowski said that both the time which had elapsed between the first infection and the supposed reinfection and the symptoms of reinfection (glands and ulcer) spoke against even entertaining an idea of reinfection. If such cases were reported as reinfection one was spreading abroad a false conception—that certain forms of syphilis treated by a certain method were curable in twelve months—a statement which was laden with great danger for both the patient and the community. How can we tell whether a patient is reinfected if we do not know whether the first infection was cured? Settle this point first. No one in the present stage of our knowledge of syphilis can prove that an infection of syphilis is cured. If one cannot ascertain that, one has no right to say that a reinfection took place.

Dr. W. J. Highman said he did not know where the discussion was leading. He himself did not know that syphilis was curable, but he had every reason to believe that it was. If so, there was such a thing as reinfection. If it was curable it was a crime that the public should not know it. The point to be determined was whether or not syphilis is curable. The reason he had asked about the inguinal adenopathy was that with a gumma one did not frequently find regional adenopathies, and that was the reason he wanted Dr. Scheer's question answered. If Dr. Lapowski wished to spread the propaganda that syphilis was incurable, he himself would spread abroad the fact that in his opinion it was curable. All he wanted was to find the truth on the subject.

LUPUS VULGARIS. Presented by Dr. O. L. Levin.

A native of Russia, aged 62, married, a jeweler, stated that he had had the eruption on his face and neck for fifty years. He had received no treatment for the condition until twenty years before, following an attack of pleurisy, when he received about twenty exposures to the roentgen rays. It had not shown any signs of activity until recently when it began to spread and ulcerate.

When the patient was first seen, one month before, the lower area of the left cheek and neck were covered by a hard whitish scar which was ulcerated in its central zone, studded with typical apple-jelly tubercles and traversed by telangiectasia. On the periphery of the lesion and in the postauricular region there were numerous discrete tubercles and patches characteristic of the disease. There was a pea-sized, elevated, hard white lesion on the elevated area of the lesion on the cheek.

The slough which was present when exhibittd was the result of the application of a caustic ointment.

CASE FOR DIAGNOSIS. PITYRIASIS RUBRA PILARIS? Presented by Dr. P. E. Bechet.

D. D., aged 13, a boy from Dr. Trimble's service, stated that in July, 1919, he fell off a subway platform and suffered a severe burn from contact with the third rail. This burn was still involuting at the time of presentation. One month after the accident, he first noticed the eruption. Two months later the trunk became involved. The lesions consisted of scaly, infiltrated, sharply defined patches, varying in area from one to several inches in diameter, with lichen planus-like shiny surfaces. In the intervals between the patches, were large numbers of shiny, pinhead sized papules. There was hyperkeratosis of the palms and soles. The patient came into the clinic on the day of presentation, so that an apology was due the Section by the presenter for an incomplete history. There was marked pituitary disturbance. The boy was of low mentality.

DISCUSSION

Dr. Howard Fox thought the condition a classic case of pityriasis rubra pilaris. It resembled psoriasis at a distance, but on close inspection the discrete scaly acuminate papules, the red thickened palms and the absence of psoriatic scales left no doubt as to the diagnosis of Devergie's disease. The case closely resembled photographs made by Dr. G. H. Fox, published in Morrow's System.

Dr. S. Pollitzer said there was no doubt that the scaling on some of the nummular patches on the anus was the micacious scaling of psoriasis, but one should consider the disease as a whole. The entire picture left no doubt that it was a case of pityriasis rubra pilaris. The characteristic follicular lesions on the back of the neck and on the abdomen, and the diffuse erythrodermic scaling of the palms made the diagnosis of pityriasis rubra pilaris obvious.

Dr. W. B. Trimble agreed with the diagnosis as presented.

Dr. F. Wise agreed with the diagnosis as brought out by Dr. Pollitzer. The only question was the duration of the condition. The boy was clearly abnormal—a dyspituitary case. He claimed that the rash broke out after he

was burned but evidently the rash must have been there for months before he received the burn and his attention was attracted to it by the dressing of the burn.

Dr. O. L. Levin said that last year he had presented a case of pityriasis rubra pilaris before the Manhattan Dermatological Society which also showed signs of dyspituitarism, which cleared up under the administration of thyroid. It would be interesting to see the effect of thyroid in this case, or thyroid combined with the pituitary gland.

Dr. W. J. Highman said that he had under treatment a woman of about 50 who had what seemed to be an alopecia areata and also lesions that suggested pityriasis rubra pilaris. She had been treated by an "endocrinologist," but the roentgen ray was curing her of the pityriasis rubra pilaris.

CHARCOT'S KNEES (Syphilis Congenita). Presented by Dr. J. J. Rothwell.

A white boy, from the service of Dr. Trimble at the University and Bellevue Clinic, aged 15, of Russian parentage, had been referred by the orthopedic department to the dermatological department for the administration of arsphenamin, in the fall of 1918. The diagnosis sent with the patient was "chronic synovitis of both knees," with a ++++ Wassermann reaction. Both knees were enlarged to nearly the size of a derby hat, there was complaint of pain—both spontaneous and due to manipulation—and the motion of the joints was restricted (they were not excessively motile). A radiograph taken at that time showed no abnormality in the bone construction of the joints, and the roentgen-ray diagnosis did not differ from that made clinically. A course of six arsphenamin treatments combined with mercury and iodid of potassium by mouth was administered, but no improvement resulted. In the spring of 1919 the right shoulder had become enlarged, but a radiograph of that joint showed nothing abnormal to induce special comment on the roentgen-ray history.

The patient was irregular in attendance at the clinic and the case was presented as a possible case of Charcot's knees.

DISCUSSION

Dr. S. Pollitzer said that on the basis of the facts presented, the case seeemed to him to show rather typical lesions of syphilitic gonitis, such as are not rare both in acquired and congenital syphilis. In the Charcot knee there was a neuropathic condition in which the articular ends of the bones were eroded, resulting in a loosening and loss of control of the joint. The Charcot knee occurs in old tabetics.

CASE FOR DIAGNOSIS. Presented by Dr. C. J. Hailperin, Newark, N. J., by invitation.

L. P., aged 52, a tailor, was presented from the service of Dr. Trimble. In July, 1918, he had "sciatic rheumatism" for which he took very hot salt water baths at the seashore. After the fourth bath, a rash appeared on the thighs, then rapidly spread down over both legs and up over the trunk and arms. The involved skin was tender and painful. Then the skin began to desquamate, peeling off in large pieces. About three months after the onset the desquamation ceased.

The appearance of the skin as presented had lasted about two months. There were numerous papules and variously sized plaques that showed some scaling. These papules and plaques were scattered all over the body except on the face and scalp. The lower extremities were markedly erythematous; the skin was quite thickened and infiltrated. There was marked itching at night. The scalp showed two or more areas of alopecia. The blood Wassermann test was negative.

DISCUSSION

Dr. J. F. Fraser said that the histologic picture was rather indefinite; it might suit an early or erythematous stage of mycosis fungoides but he did not think any one could make a diagnosis on the histologic grounds at the present stage. Before committing himself finally he would like to examine a more advanced lesion.

Dr. W. J. Highman said that he and Dr. Hailperin had gone over the case together and on purely clinical grounds it would seem that a pre-fungoid stage of mycosis was the most likely diagnosis. He based this opinion on the fact that the lesions were apparently pruriginous; in the main they were located on the lower half of the body, which was a point that Jadassohn used to lay great stress on; and finally there was marked infiltration in the lesions—some of them, over the buttocks especially, were so infiltrated that the only diagnosis they suggested was early mycosis. There was no need for Dr. Fraser to be discomfited that at this early stage there was nothing pathognomonic about the case. In the early stage there was rarely anything pathognomonic microscopically. In such a condition the clinical diagnosis was of more importance than the histologic one.

Dr. W. B. Trimble said that he had seen the patient but once before and did not wish to put himself on record as making an absolute diagnosis, but from the isolated lesions on the arms it seemed to be an atypical form of lichen planus, though that did not fit the condition on the thighs; whether the latter was caused by some form of treatment that had been applied or whether there was a dermatitis on top of another condition, did not appear. It would be interesting to learn the pathologic diagnosis.

Dr. L. Oulmann suggested parapsoriasis lichenoides. The variety of lesions, the scaliness, the histologic absence of the diagnosis of mycosis fungoides and very little itching did not speak for the diagnosis of the latter.

Dr. B. Lapowski said that with such a poor light it was impossible to distinguish the primary lesion from the secondary or to distinguish the type of inflammation on which Dr. Trimble had laid stress. On the mucous membrane of the left cheek there was a white spot. The man was a smoker, and it might be due to that. It was necessary to see such a case many times in a good light to clear up the diagnosis.

Dr. P. E. Bechet said that through Dr. Hailperin's courtesy he had been enabled to observe the case very carefully by daylight. He could not agree with the diagnosis of lichen planus. The lesions consisted of aggregated patches which were sharply defined and of a dark red color, with a tendency to circinate and serpiginous development, particularly on the arms. Some of the lesions were certainly infiltrated. The lesions on the mucous membrane of the mouth resembled leukoplakia more than lichen planus. He was inclined to consider the case one of early mycosis fungoides.

Dr. C. M. Williams said that to him it seemed to be a case of premycosis for these reasons: Many of the lesions were large, certainly half an inch or an inch in diameter; while the surface was not altered; in lichen planus you could find a distinct alteration in the epidermis; on the other hand, the infiltration in this case seemed deeper and more marked. One could not tell much about the color by gaslight, but the color, which was a dark purplish red, was much more like that of premycosis than of lichen planus. It had been stated that the man denied itching. It might be that he did; nevertheless he was constantly scratching. The patient just presented asserted that he was much better now than he was some time ago; in other words, he had improved, which seemed to suggest mycosis fungoides. Dr. Williams said he could not think of lichen planus showing such large plaques with so little change in the epidermis.

Dr. W. J. Highman said that all the visual observations he had made, however, during the evening were subject to the artificial light; but as for the infiltration, that was a matter of tactile sense and he could detect an infiltration if he were blind. The course of mycosis fungoides had been so clearly outlined by Dr. Williams that it was not necessary to repeat it. By a process of elimination, the negative evidence supplied by Dr. Fraser of his histologic examination seemed to be convincing. If it had been a case of lichen planus Dr. Fraser would have noted that fact.

Dr. B. Lapowski said that to his mind, given that this case was of six months' duration, it did not present the premycotic stage. He would rather accept the diagnosis of lichen planus. He expressed the hope that Dr. Hailperin would present the case again six months later, and then we would know positively.

TUBERCULOSIS MUCOSAE ORIS. Presented by Dr. A. Rostenberg.

The patient, aged 35, born in Germany, a waiter, with a family history negative in regard to tuberculosis, had been well up to six years before, when he developed a cough. Four years before presentation he noticed an ulceration on the inner surface of the lower lip which healed up under local treatment in the course of about two years. In January, 1919, he came to the Lenox Hill Hospital Dispensary with a swelling on the left cheek about the size of a small walnut. The tumor was hard and was not painful. A Wassermann reaction was taken and was negative. The patient then remained away for a few months, and when he came back the outside swelling had disappeared but on the mucosa there was a large, deep ulceration extending down to the lower lip, and in addition there were a few smaller ulcerations on the gingiva. A Wassermann reaction was again taken and found to be negative. Specific treatment, however, improved the condition greatly, but did not clear it up entirely. The ulceration then began to resemble more a tuberculous ulcer, and an examination of a scraping revealed tubercle bacilli. A roentgen-ray examination of the chest also showed tuberculous foci. The patient was then put on the Pfannenstiel treatment, i. e., he received potassium iodid internally and applications of hydrogen peroxid on the ulceration. Under this treatment he had improved so much that the ulceration had almost healed.

DISCUSSION

DR. F. WISE said that the patient had been under Dr. Goldenberg's care and the improvement was wonderful. Both he and Dr. Highman had seen the patient six weeks before at Mount Sinai Hospital, and the cheek was then greatly swollen and bulging out. It was the most rapid improvement he had ever seen in a tuberculous process.

DR. O. L. LEVIN said he had seen the patient more than a year ago, when he showed marked involvement of the mouth which was very much swollen, covered with undermined ulcers and tubercles. The marked improvement from treatment was surprising and interesting.

DR. A. ROSTENBERG said he simply wished to emphasize the value of the Pfannenstiel treatment in this case, since it did not seem to be very well known. It had been suggested to him by Dr. Goldenberg of Mount Sinai Hospital.

LICHEN PLANUS ANNULARIS. Presented by DR. P. E. BECHET.

BROMID ERUPTION. Presented by DR. F. WISE.

Goldie M., a nursing infant, 5 months old, from Dr. Fordyce's clinic, presented an eruption of three months' duration. The left cheek presented two large verrucous lesions. Scattered over the buttocks, thighs and scalp were numerous macules, erythematous papules and verrucous lesions. They were most numerous on the buttocks and thighs. The mother of the child had taken bromids for four months previous to its birth, but the eruption did not appear on the infant until it was 2 months old.

HEMI-ATROPHY OF THE FACE AND SCALP. Presented by DR. O. L. LEVIN.

This patient had been presented at the December meeting of the Manhattan Dermatological Society, and the history and physical condition were reported in the proceedings of that meeting. Three years before the patient had been treated for scleroderma with thyroid by Dr. Parounagian, and the atrophy present was probably the sequel of the scleroderma.

DR. M. B. PAROUNAGIAN said he had treated the patient several years ago when she had a bone-like morphea of the scalp and a morphea on the sternum. She was given thyroid extract for several months and then disappeared from observation.

LUPUS VULGARIS DISSEMINATUS. Presented by DR. HOWARD FOX.

M. D., a full-blooded negress, aged 35, born in the British West Indies, with a negative family history, had malarial fever thirteen years ago, had formerly suffered from dysmenorrhea and had always been delicate. Four years before she had been operated on for pyosalpinx.

The eruption first appeared on the face and later on the trunk and extremities; new lesions were appearing. They consisted of dull, brownish red, firm, mostly smooth, dry nodules. They were rounded, oval, and irregularly shaped, varying from the size of a split pea to that of a nickel. There was a slight tendency to grouping on the arms but there was no circular configuration. There were no subjective symptoms. The Wassermann reaction was strongly positive. There were no other symptoms pointing to syphilis except one pre-

vious miscarriage. There were symptoms of probable tuberculosis including cough, night sweats, recent loss of weight, râles scattered over the chest and occasional evening temperature. The sputum was negative for tubercle bacilli. A biopsy had been made previously at Mount Sinai Hospital which, according to the statement of Dr. Isadore Rosen, showed the histologic structure of tuberculosis.

DARIER'S DISEASE. Presented by Dr. W. J. Chargin.

C. P., a married woman, aged 32, born in this country of Italian parentage, had always noted a "roughness of her skin," but first observed the condition presented about two and a half years before. It began on the lower back and when presented involved the lower back, both legs and isolated areas on the arms and chest. The affection was made up of closely aggregated small papules, apparently follicular and perifollicular. The papules were capped with a dry horny lug which, however, was not readily removed and when removed did not leave a distinct crater formation. The affection was especially marked on the middle of the legs and from there shaded off to normal skin on the upper thighs and feet. There was a general dark coloration of the entire skin involved, which was quite black on the mid-legs. There was a moderate amount of scaliness. Subjectively the patient complained of very little itching. The patient's mother was similarly affected.

DISCUSSION

Dr. F. Wise expressed the opinion that this was one of the most interesting cases presented during the evening. It did not seem to be a typical case of Darier's disease, but it would be difficult to make a definite diagnosis. In an eruption so extensive, one would expect to see the little pitted scars so often seen in the palms. The fact that other members of the family showed the same condition was in favor of the diagnosis, but it seemed doubtful if one would be justified in making a definite diagnosis without a microscopic slide.

Dr. Pollitzer agreed with Dr. Wise. The distribution of the lesions over the lower extremities was not like that of Darier's disease, in which the upper extremities, axillae, trunk and head are mainly affected. Clinically, the lesions seemed to be a keratosis of the follicles, but whether or not it was a case of keratosis follicularis could not be definitely determined in the absence of a biopsy.

SARCOID. Presented by Dr. O. L. Levin.

M. W., aged 43, born in Russia and was a housewife, had been married for five years. She had one miscarriage four years before. A second pregnancy was completed, but the child died at the age of 3 weeks. The condition presented began about a year before presentation as eruptions of discrete red lesions on the arms, legs and buttocks; these ulcerated after one week. Two months before the patient began to notice lumpy masses on the right arm with purplish discoloration of the skin. Similar eruptions appeared on the left arm and one month ago on the buttocks. None of these lesions, except those on the right leg, ulcerated. A Wassermann reaction taken two months before was +. The patient received ten injunctions of mercury up to one month ago.

On the extensor surface of the right arm where plaques of different purplish discoloration of the skin, without elevation or scaling, but in places showing on palpation pea-sized globular infiltrations. There was a similar but less

extensive condition on the left arm. On the left shoulder there was a large pea-sized, dark-red, firm nodule. There was a similar but small pea-sized nodule on the right shoulder. Both breasts, especially the left, showed diffuse purplish discoloration, with the presence of small papules. Both buttocks showed diffuse purplish discoloration with lentil-sized to small pea-sized tubercles. The extensor surfaces of both elbows showed ham-colored scaly and slightly infiltrated patches. Both legs were covered by diffuse purplish plaques, small pea-sized hard and deeply seated tubercles and small round depressed scars. There was also a folliculitis of the nose. The Wassermann reaction on Dec. 19, 1919, was negative.

DISCUSSION

Dr. W. B. Trimble said that this was a particularly interesting case. The lesions on the upper part of the body were seemingly those of sarcoid though those on the legs were ulcerating, and ulceration was not a feature of sarcoid. He could not recall any case of sarcoid either in his own experience or in the literature in which the tumor had broken down; the lesion was a nonulcerating tumor of the hypoderm. The leg lesion in this case might be erythema induratum. If the case was sarcoid, it would not be the sarcoid of Bock but the Darier-Roussy type.

Dr. W. J. Highman agreed with Dr. Trimble. The lesions on the legs appeared to be erythema induratum; the lesions on the buttocks and forearms were papulonecrotic tuberculids. It seemed to be a matter of hair-splitting. It was a toxic tuberculid of the skin.

Dr. C. M. Williams expressed the opinion that it was a tuberculid.

Dr. O. L. Levin said he had hesitated to make the diagnosis of sarcoid and he had hoped that the presentation of the case with that diagnosis would bring out discussion. He called attention to the fact that there was an erythema induratum type classified under the general heading of sarcoid. The skin showed not only the necrotic tubercles on the legs but also large superficial, slightly indurated purplish plaques on the arms, as well as hard subcutaneous nodules over the shoulders. Biopsy did not aid in making a positive diagnosis. The tissue examined was from a large tubercle on the left arm, and the pathologist at the hospital reported normal skin. The slide that he himself had examined showed a slight hyperkeratosis of the stratum corneum and the presence of small infiltrations of round and epithelioid cells in the corium. The Wassermann reaction of the blood was +, several weeks before; and negative one week before. The history showed that the condition had been present for only one year, and it was unusual for erythema induratum to appear for the first time at the age of 42.

MYCOSIS FUNGOIDES. Presented by Dr. P. E. Bechet.

J. P., aged 27, from the service of Dr. Trimble at the University and Bellevue Clinic, stated that the eruption began three and a half years before. When first seen, June 13, 1919, he presented for examination large erythematosquamous, sharply defined and slightly infiltrated patches, covering most of the trunk. They were markedly pruritic and of a dull red color. Rapid improvement followed the administration of six intravenous injections of arsphenamin. At the time of presentation the patches on the trunk had mostly disappeared,

leaving only some stains. The patches on the thighs were still in evidence. A biopsy had been made and Dr. Fraser reported that the main histologic features consisted of marked edema and dense cellular infiltration in the upper third of the corium. Small lymphocytes, numerous large lymphocytes with deeply stained nucleoli and fibroblasts were present. The endothelial cells of the capillaries were proliferating and in places were grouped together like poorly formed giant cells. There was marked intracellular edema in the basal portion of the epiderm, especially at the tips of the papillae. There was down growth of epithelial pegs.

DISCUSSION

Dr. F. Wise said the patient had been under his care a year before and was then covered with large patches that itched so much that he could not sleep. A biopsy was made and the condition was reported to be typical mycosis fungoides. He was given a careful and persistent course of roentgen-ray treatment, but showed no improvement.

Dr. W. B. Trimble said he had seen the patient on several occasions, the first time at the Skin and Cancer Hospital, when he had made the clinical diagnosis of premycosis, which was later confirmed by the laboratory. Since that time the patient had been presented by Dr. Wise with the same diagnosis. The patient finally presented himself at the Bellevue and University Clinic where the same diagnosis had been made. Even though the evidence in favor of premycosis was strong, he thought one should seriously consider the probability of its being parapsoriasis, the type erythrodermie pityriasis en plaque disseminées. The intense itching was of course against such a diagnosis but he was inclined to believe that this symptom was exaggerated by the patient. This was merely offered as a suggestion, since it should not be forgotten that pathologic examinations were not always correct, and there was just as much ground for a difference of opinion in pathology as in clinical medicine.

Dr. J. F. Fraser said the histological examination absolutely excluded parapsoriasis. It was typically a case of mycosis fungoides.

TUBERCOLOSIS VERRUCOSA CUTIS. Presented by Dr. P. E. Bechet.

This case had been previously shown by the speaker at the meeting of the Section on Nov. 5, 1919, and was also from Dr. Trimble's service. The patient was 51 years of age and had been operated on on April 4, 1917, for fistula-in-ano. A second operation was performed on Dec. 25, 1918. He stated that there was a rapid increase in the eruption during the three months previous to presentation. The eruption was limited to the anal region, and consisted of a large verrucous, papillomatous, hypertrophied patch with a seropurulent fluid in the interstices of the papillary projections. At the perineum there was some tendency to indolent, undermined ulceration. There was marked surrounding infiltration. A biopsy demonstrated the presence of giant cells with homogeneous centers and peripherally arranged nuclei.

RADIO-DERMATITIS. Presented by Dr. W. J. Highman.

Aaron M., presented a radiodermatitis—a chronic ulcer of the abdomen. He was radiographed ten years before for attacks of renal colic, but did not remember the length nor the number of exposures, nor exactly the time of onset of the dermatitis.

The radiodermatitis (telangiectasis, pigmentation and atrophy) extended from the ensiform to the pubis, and from the right to the left mammary lines. One inch above the umbilicus was a shallow ulcer about one quarter of an inch in diameter, which constantly oozed pus. The ulcer was first noticed at the time of the onset of the dermatitis. There was no clinical evidence of malignancy. The case was presented for suggestions as to therapy for the ulcer.

DISCUSSION

DR. F. WISE expressed the opinion that radium should be applied in a case of this kind. If the lesion were excised, the skin would not heal. Radium was not only the last resort but the only hope of curing the condition.

DR. B. LAPOWSKI thought the lesion should be left alone and not interfered with beyond protecting it from irritation. Radium would produce the same result as the roentgen ray.

DR. J. KINGSBURY agreed with Dr. Lapowski that the less done to the case the better.

DR. A. J. GILMOUR suggested the use of gauze instead of cotton in protecting the condition, as it provided better aeration.

DR. S. POLLITZER said that the consensus of opinion seemed to be that the patient should be let alone until the condition killed him. In his opinion there was a limit to the depth and extent of the tissue damage by the roentgen ray, and if one went beyond that limit the damage could be removed. Speaking of roentgen ray ulcerations in general (not of this particular case), he believed that whenever the locality made it possible they should be excised widely and deeply and the defect covered with grafts. He cited the case of a woman who had suffered severely from an ulceration as large as a fist lasting more than a year, in which this treatment was adopted, resulting in a cure of the condition. The operation was done not only to relieve her excruciating pains but to obviate the development of epithelioma, a risk to which all these patients are exposed. He believed this method should be followed in every roentgen ray ulcer where it was practicable.

DR. HIGHMAN said he had stated his reason for presenting the case. If Dr. Pollitzer had seen the patient he would have realized that the treatment advocated was impossible in this particular instance as the affected area was a foot and a half in diameter. He had thought of carrying out the treatment suggested by Dr. Wise, as radium could cause nothing worse than the condition presented. It did not seem right to give up the case as hopeless, and there was little likelihood of stimulating the lesion to malignancy. In fact, he was not sure that it was an epithelioma at all. The man had not given his consent for a biopsy.

PSORIASIS AND DERMATITIS EXFOLIATIVA. Presented by DR E. W. ABRAMOWITZ.

Thomas M., was from the Vanderbilt Clinic. He was born in the United States, was 56 years of age, married and had one child. He presented himself at the Clinic with the history of having had psoriasis for nine years. He had had two previous attacks of dermatitis exfoliativa which had cleared up. As presented, there was a marked erythema with branny desquamation of trunk and extremities.

NEW YORK ACADEMY OF MEDICINE, SECTION ON DERMATOLOGY AND SYPHILIS

Regular Meeting, Feb. 3, 1920.

JOHN A. LANE, M.D., Chairman.

FOR DIAGNOSIS: LUPUS ERYTHEMATOSUS VS. LUPUS VULGARIS. Presented by DR. HOWARD FOX.

E. G., a woman, aged 45, a children's nurse, born in England, came to the United States four years before presentation. Her mother died of consumption; the family history was otherwise negative. She had suffered from measles and whooping cough as a child and from several attacks of articular rheumatism and tonsillitis as an adult.

The eruption was first noticed about twelve years ago, beginning as reddish spots on the skin which promptly disappeared under local treatment. The eruption then appeared on both cheeks in front of the ears, where it had persistently remained until the present time. These patches were red, dry, slightly scaly areas the size of a silver dollar. According to her statement, they were seen at the outset by Drs. Crocker and Pernet of London, who made a diagnosis of lupus vulgaris, explaining to her that the condition was a localized tuberculosis of the skin. About eight years ago a patch appeared on the right temple which promptly disappeared after using some "dark ointment." During the past four months there had been a rapid extension of the disease. As presented, there was a solid sheet of eruption about 3 by 3 inches, extending from the hair line down on the neck, below the angle of the jaw. There was a semicircular area below the left eye about 2½ inches in length. The original patch in front of the left ear remained unchanged. All of these lesions were solid patches with sharply marked borders, reddish, dry and showing a few small, easily detached scales. There was no evidence of scratching. All of these pathes resembled lupus erythematosus. On the right side of the neck and chest was a circular patch about 4½ inches in diameter, which appeared to be made up of closely crowded, large pinhead sized, individual, slightly raised lesions. A superficial lupus vulgaris was suggested, although glass pressure failed to show any distinct apple-jelly nodules. The patient was poorly nourished, but appeared to be in good health. There were no signs of pulmonary tuberculosis. A biopsy had been made on the previous day.

DISCUSSION

DR. S. POLLITZER said it was a case of unusual interest on account of the history. The distinguished dermatologists who had seen it made the diagnosis of lupus vulgaris, a diagnosis with which he could not agree. His reasons for differing were several. Of course, he recognized the difficulty at times of making a differential diagnosis between the two conditions, but in the first place there was the history of the lesions on the side of the face in front of the ears, which disappeared without any scars; and in the second place there was the extremely large patch on the upper chest which developed in four months. That a patch of lupus vulgaris should attain such dimensions in four months would be extraordinary. Finally, while there was a slightly papular character to the large patch on the chest, the lesions were not such as would justify the diagnosis of lupus vulgaris. Furthermore, Dr. Fox had been unable with the

diascope to detect any lesions that would indicate lupus vulgaris nodules. For these reasons the speaker was strongly inclined to regard the condition as one of lupus erythematosus and not vulgaris.

Dr. W. B. Trimble said he had seen about three cases in his life in which he found it difficult to decide between lupus erythematosus or vulgaris, and this one made the fourth. The case was extremely difficult to diagnose, though if he had to decide from one examination alone he would call it lupus vulgaris. The grouping of the lesions on the right side of the chest and neck, through which area any number of papules were scattered, seemed to point against lupus erythematosus.

Dr. A. J. Gilmour thought the case was lupus erythematosus. He had noted some little scales on the chest lesions.

Dr. Fox said he thought the lesions on the face resembled lupus erythematosus, though the scaling was not characteristic of that disease, and that the patch on the chest resembled a very superficial lupus vulgaris, though diascopic pressure showed no brownish nodules. It would be necessary to wait for the histologic examination to determine the diagnosis.

Dr. W. B. Trimble remarked that the case resembled one that Dr. H. Fox had showed some years ago—that of a Swedish woman with lesions on the thigh. He remembered having photographed the patient for Dr. Fox.

INVOLUTED MYCOSIS FUNGOIDES. Presented by Dr. W. J. Highman.

B. G., a man, aged 38, had had his present illness for five years. He first consulted the speaker four years before presentation, suffering with a dermatosis giving the clinical picture of pityriasis rubra (Hebra). The condition had begun eleven months before, with the appearance of a scaling, itching spot on the left thigh. A rapid general evolution followed, and on Jan. 14, 1916, when first seen by Dr. Highman, the patient showed a generalized dusky red exfoliation, ectropion of the left lower lid, general glandular enlargements such as are observed in Hodgkin's disease, and emaciation. Sixteen pounds had been lost in eleven months. Microscopically, pityriasis rubra was suggested.

After unsatisfactory roentgen-ray therapy, the patient went to Jadassohn in Berne, in the summer of 1917. Here a diagnosis of an unusual form of mycosis fungoides was made. A microscopic study of an extirpated gland sufficed to exclude Hodgkin's disease. Under fractional doses of roentgen rays, the cutaneous manifestations involved, and when the patient was again seen in October, 1917, the skin was chocolate colored, but no longer scaled or itched, and the glands were smaller. Aug. 30, 1918, a few papules were found on his trunk, suggesting seborrhea. The skin was paler; no glands were palpable. On Jan. 9, 1920, the pigmentation of the skin had disappeared, and no evidence of the former condition was present.

Dr. S. Pollitzer said he had seen the patient some time before Dr. Highman observed him, and expressed regret that he had not known the case was to be presented, as he could have brought his notes with him. When he saw the patient, the condition was a typical case of dermatitis exfoliativa of the Hebra type, and there was no tumor-like thickening of the skin. The diagnosis of mycosis fungoides depended on two factors—the occurrence of diffuse infiltrations, which come and go rapidly, and the therapeutic result. As to the infiltrations, he would like very much to know about them. He understood that

no biopsy had yet been made. That was necessary for a diagnosis, for the fact that the man had an exfoliative dermatitis and was cured by the roentgen ray —if he was cured—did not establish the diagnosis of mycosis fungoides, athough it was to be admitted that Jadassohn's diagnosis of some peculiar form of mycosis carried great weight. It was unfortunate that the diagnosis had not been clinched by the examination of tissue. It was a most interesting case, and it was to be hoped that both Dr. Highman and the patient would live many years so that more could be learned about it.

Dr. Highman said that when Jadassohn wrote, he was about to leave Berne for Breslau; he extirpated a gland and doubtless made an examination of the tissue, but he said it was not Hodgkin's disease. The patient would not allow another biopsy to be made. He intended to write to Jadassohn to learn whether histologic examination of the skin had been made.

MULTIPLE ABSCESSES. Presented by Dr. Howard Fox.

J. V., a man, aged 28, a laborer, born in Spain, three months before was operated on for vesical calculus (suprapubic cystotomy). About a month later, the eruption appeared on the abdomen. According to his physician's statement this at first consisted of half a dozen superficial vesicopustules, which in about one week became deep seated low grade abscesses, followed by necrosis and discharge. Some of these lesions had healed; others were still crusted, and others presented somewhat punched-out central openings. The lesions, about forty in number, were scattered over the entire abdomen. In addition, there were a few on the wrists, in both axillae and on the shoulders. They were deep-seated, indolent, slightly painful, with considerable brownish infiltration of the surrounding skin. The eruption had not been accompanied by any constitutional symptoms. The patient was apparently in good health, and was somewhat stout and showed a decided hypertrichosis of the trunk and extremities. Two Wassermann tests had been entirely negative. Two cultures had been made in which only the *Staphylococcus aureus* was found. Five injections of an autogenous vaccine had been given, with some slight improvement. A biopsy had been made recently.

DISCUSSION

Dr. B. Lapowsky said that if there were any doubt about the diagnosis it was advisable to transfer the lesion in imagination to some other locality—say, to the leg—recalling conditions of the same type though not of the same distribution. He could remember five or eight such lesions, beginning with a deep destruction, rupia-like and leaving a scar. He expressed agreement with what Dr. Fox had said, and suggested the application of Vleminck's solution—removing the scabs first, then applying a weak dilution and later increasing the strength.

Dr. G. M. MacKee said that an important point in the differentiation was the history. There seemed to be a definite history of lesions at first superficial and later becoming deep-seated. That would rule out tuberculosis or syphilis. Beginning, as they did, as vesicles and papules and then becoming deep ulcerations would naturally suggest a pyoderma.

Dr. W. J. Chargin said that the case brought to his mind a patient he had seen some two years before who presented similar lesions, though not so numerous. The affection in that patient was especially marked on the forearms and legs and appeared after an attack of pneumonia. It was thought

that the affection was due to the pneumococcus, but that could not be demonstrated bacteriologically. The staphylococcus, however, was found and a considerable number of autogenous vaccines cleared up the condition entirely.

Dr. W. J. Highman said that clinically the nature of the disease was obvious, but the cause of the condition was a problem. A sketchy bacteriologic study was worthless for staphylococcus was always found. There was little doubt that the staphylococcus caused the lesions, but the case remotely suggested the condition caused by the *Bacillus pyocyaneus*. It was evident that the patient had a staphylococcus infection without cultivating the organisms. It was also reasonable to suppose that on account of the surgical shock there was some underlying disturbance of the system. Dr. Michael had suggested an amebic infection such as Engman had recently described. If a patch of the abdominal skin were stretched over the shins, it would be like an erythema induratum, and the patient might be suffering from the type of skin tuberculosis known as acne cachecticorum. Certainly it was a bacteriologic and not a clinical study. Should the fusiform bacillus be found in the case, the patient might possibly be benefited by peroxid of hydrogen.

Dr. O. L. Levin said the case was of a type seen now and then at the Beth Israel Clinic. The patients usually showed a run-down condition. A hasty, superficial examination disclosed that the patient's extremities seemed to be out of proportion with the length of the body; he was obese, showed an excessive growth of hair, hyperpigmentation, cold clammy hands and a small penis. If the blood were examined, it would probably show a hyperglycemia. The carbohydrate tolerance should be observed. The ulcerations and abscesses depended on a staphylococcus infection of the hair follicles, giving rise to a folliculitis, and on account of the poor general resistance the infection spread deeply and resulted in the breaking down of the tissue and the development of the abscesses and ulcers.

Dr. W. B. Trimble said that on a clinical examination alone the diagnosis would rest between a staphylococcus infection—which seemed to be the generally accepted opinion—and syphilis. Some of the lesions looked exactly like syphilis; they were "punched out" in appearance and there was a distinct loss of tissue. If the patient's blood reaction was positive instead of negative, it would be interesting to know how many would call the lesions gummas. Deep ulceration of this nature due to the streptococcus—ecthyma—usually occurred in anemic, poorly nourished persons. This patient did not to him seem to be in bad physical condition, and should have the benefit of the therapeutic test before the diagnosis was made absolute.

Dr. Howard Fox said that in the formal discussion no one had mentioned syphilis until Dr. Trimble spoke of it. That was ruled out, he thought, from the appearance of the case. The lesions were bilateral and there was no grouping. They began as superficial vesicopustules, developing later into abscesses. Cultures had been made and more would be made. A section that had been taken might throw some light on the case. It did not seem to be an ordinary furunculosis as the lesions were indolent and almost painless.

LUPUS ERYTHEMATOSUS. Presented by Dr. I. Rosen.

M. D., aged 45, who had been in the United States sixteen years, had had the eruption for the past five years. The first signs of the disease commenced below the lobule of the right ear and spread backward. Then the left ear became affected. Two and a half years before presentation the mucous

membrane of the lips became involved, spreading on to the skin. As presented, there were numerous twenty-five cent sized patches on the back and others half that size. There was an oval scar on the left side of the neck, probably from a healed tuberculous adenitis. The patient also presented a patch of scarring and telangiectases on the right ear and mastoid region which were sequels to roentgen-ray treatment.

CHRONIC EDEMA OF THE EYELIDS. Presented by DR. HOWARD FOX.

B. B., a man, aged 28, born in the United States, a plumber, previous to the beginning of the eruption, about thirteen years before, had suffered a severe traumatism of the head, remaining in bed one month as a result. He had also broken his nose once before and twice after the eruption appeared. During the past thirteen years he had had a great many attacks of swelling of the tissues about the eyes, including the cheeks and at times the ears. These attacks frequently followed some mental trouble or severe physical strain. They consisted of redness, swelling and increased temperature of the affected parts, associated with a burning sensation and a varying degree of constitutional symptoms. At times he would be confined to bed with chills, rise of temperature, and more or less prostration. The attacks were often considered to be attacks of erysipelas. They lasted from three to ten days, and in later years had appeared on an average of once a month. There was always a certain amount of swelling of the tissues about the eyes, which never subsided entirely between the attacks. In 1918 the patient was in military service for about four months, during which time he had one unusually severe attack following typhoid and smallpox vaccination.

He was at present under the charge of the U. S. Public Health Service and his case had been thoroughly investigated by the surgeons of this service. Examinations had been made of the heart, lungs, abdomen and genito-urinary organs, blood (including the Wassermann reaction, red cells, hemoglobin, differential leukocyte count and plasmodium), urine (including sugar tolerance test), eye and ear examinations, and roentgen-ray examinations with especial reference to the sinuses, sella turcica and signs of intracranial pressure—but all were negative. Under the impression that the case was one of angioneurotic edema, he had received a large number of protein skin tests, with negative results. Examination of the nose showed evidences of old fracture and a missing septal cartilage. Roentgen-ray examination of the skull showed evidence of a probable old fracture of the vault. A puncture of the tissues below both eyes failed to give any fluid from which a vaccine could be made. The patient was well nourished and between attacks appeared to be in average good health. He was presented as a case of the elephantiasic type of chronic edema, supposedly due to recurring attacks of an erysipelatous nature caused by a streptococcus infection arising in the nose.

DISCUSSION

DR. E. A. REED, U. S. Public Health Service (by invitation), said that he had had the pleasure of watching this patient for the past three months. During this time, while a patient of the U. S. Public Health Hospital, New York, he had had three acute attacks. The patient would feel irritable the day before and usually complain of constipation. He would notice the appearance of a small red area in the region of the inner canthus, which in time

would spread through the loose cellular tissue of the lids, forehead, scalp, cheeks and lips, with enlargement of the glands at the angle of the jaw and submental group. The swelling of the eyelids became so marked that the patient could not see. Pressure on the lids themselves would result in the escape of a small quantity of serous fluid from the nasal orifice on that side, although aspiration of the lid itself in the most careful manner revealed no fluid. With the onset of the first patch of inflammation, the patient complained of headache and of a drawing and tightening sensation, fever which reached 103 degrees and a chill which lasted three hours. Working on the assumption that it might be due to a disturbance of the vegetative nervous system, the patient was given atropin sulphate, $\frac{1}{25}$ grain every three hours, until physiologic action was reached. The swelling subsided a little, but not to any marked extent. Constipation was relieved by enemas, after which he left somewhat better and noticed that some of the swelling disappeared.

He was tested by almost every method possible—protein sensitization, on the opinion that it might be a form of allergic poisoning; roentgen-ray examination of sinuses, skull and bones for a focal infection; examination of the tonsils and later removal of them; roentgen-ray examination of the teeth—all to rule out the possibility of a condition due to focal infection.

So far as the nasal condition was concerned, the man had had several injuries of the nose since childhood and had been operated on six times in the past seven years. Examination subsequent to the last operation showed a complete destruction of the nasal septum and mucosa, and opinions rendered by various rhinologists indicated that nothing could be done by way of repair and that the patient would probably suffer from this condition during the rest of his life.

Dr. J. E. Lane inquired about the duration of the lesion on the upper lip, and Dr. Reed replied that it was a herpes and had been there for six days.

Dr. Lane then inquired whether at any time there had been any evidence of an acute or chronic dacryocystitis.

Dr. S. Pollitzer said that the very complete history presented by Dr. Reed covered a very large field. The case in question belonged to a class that was not especially rare and the course and etiology were fairly well known. In his opinion, it was a case of chronic elephantiasis of the face due probably to a low grade streptococcic infection. A number of such cases had been presented before the Section. The only feature that would have to be proved was the streptococcic element; that was largely a matter of guesswork, but the streptococcus did produce this condition. An important etiologic factor seemed to be the repeated nasal trauma, which afforded opportunity for the introduction of the streptococcus into the neighboring tissues, and the periodic exacerbations were explained by the story the patient gave of having the attacks following excitement, which would be the immediate stimulus to the streptococci that ordinarily lay dormant in the tissues. It might be possible to make a streptococcus culture from the nasal cavity, and then with vaccines something might be done for relief. Etiologically the case was not a nervous condition, nor an endocrine disturbance, nor was the trouble in the bones—it was a low grade infection of the tissues resulting in a blocking of the lymphatics of the affected region.

Dr. E. W. Abramowitz said that at the Vanderbilt Clinic there had been three cases of this condition and they had been classified as elephantiasis nostras. One case showed involvement of both upper eyelids; the second showed enlargement of the right index finger, and the third enlargement of the upper lip.

With Dr. Guy's collaboration a short chain streptococcus was discovered in the tissue from the lip case. It seemed probable that all these cases were due to an infection of the nose and adjacent sinuses. The use of a streptococcus vaccine had been of great help.

Dr. W. J. Highman cited a case of similar type in which an attempt was made to aspirate the lesions during an acute flare-up in the hope that the causative agent might be obtained. The procedure was successful and the patient improved under autogenous vaccines. A colonel in the regular army came into the hospital in this condition and the speaker was very anxious to try this treatment on him, but the officer was transferred before anything could be done. The pathology seemed to be the same as that described by Dr. Pollitzer. In attempting to rule out the possible source of infection, it would be well to remember that the body did not consist entirely of tonsils and teeth; various other elements enter into the composition of man. As Dr. Lane had pointed out, the patient's upper lid was more or less involved, and as Dr. Pollitzer had suggested the streptococci might have their derivation from the nose and might provide a lead for treating the patient successfully. Certainly the amount of work that had been done on the case was overwhelming.

PRURIGO NODULARIS. Presented by Dr. W. J. Highman.

A widow, aged 55, presented from the service of Dr. Whitehouse at the Post-Graduate Hospital, had a condition was of eighteen years' duration which itched intensely. New lesions were constantly appearing. The old ones did not fade.

DISCUSSION

Dr. B. Lapowski thought it was a sarcoid.

Dr. F. Wise said that the appearance of the lesions agreed with the classic description of prurigo nodularis.

Dr. Howard Fox said that clinically it resembled cases described as prurigo nodularis, although some of the lesions on the ankle suggested sarcoma. There were certainly marked evidences of scratching on the arm.

Dr. Highman said the lesions itched intensely, which was not characteristic of sarcoma, nor did the history of eighteen years' duration accord with Kaposi's or any other form of sarcoma. If it was sarcoma, certainly it was a benign, indolent, itching type—a new concept. The disease was just a name to him; it resembled the pictures he had seen and one case that had been pointed out to him as prurigo nodularis. He rested the case on that.

PIGMENTATION AND HYPERKERATOSIS. Presented by Dr. O. L. Levin.

R. K., an unmarried woman, aged 20, a native of the United States and a typist by occupation, had had recurrent attacks of psoriasis for four years. The attack from which she was suffering when presented began three weeks before, four days after sustaining a fracture of the bones of the left forearm. She had had neuralgic pains and eruption of blisters on the right side of the chest for ten days.

Her past history was negative except for scarlet fever and diphtheria at the age of 8. Her menstrual history began rather late, at the age of 16, the flow appearing every ten or twelve weeks, being scanty, persisting for only

two days and accompanied by dysmenorrhea. For more than two years she had been taking daily doses of arsenic.

The skin showed a general eruption of various sized typical bright red scaly papules and patches of psoriasis. The skin on the palms was thickened, dry, fissured and scaly. The hyperkeratosis was more marked on the left palm, as the patient could not wash away the heaped up scales on account of the splint. A similar condition was present on the plantar surfaces of both feet. The skin, especially of the trunk, was of a light brown color and at points of pressure, as along the waist line and axillary folds it was of darker hue. There was a large herpes zoster on the right side of the chest.

SCLERODERMA. Presented by DR. A. J. GILMOUR.

C. C., aged 23, was a white woman, married, with two healthy children, a boy of 6 and a girl of 8. The lesions began eight years before presentation on the back of the little fingers and when presented involved all the fingers and both hands. There was also a lesion on the chest of eight years' duration.

LICHEN NITIDUS. Presented by DR. W. B. TRIMBLE.

A colored man, aged 26, who had previously been shown before the New York Dermatological Society, a native of the United States, had had the condition about four months. The eruption consisted of thickly grouped small pinhead sized, whitish-yellow, raised lichenoid papules on the backs of the hands, shaft of the penis and extensor surfaces of the elbows. There were a few scattered papules back of the ankles. The Wassermann reaction was negative. There were no subjective symptoms. A biopsy had been made and a section through one of the individual papules showed a sharp lesion of the papillary portion of the derma which had the general appearance of a granuloma. The epidermis above it was thinned and at the sides there was an acanthosis. The infiltration consisted of epithelioid cells and small mononuclear cells. No giant cells were found in the specimen.

DISCUSSION

DR. S. POLLITZER said this was the first time a case of the kind had been presented before the Section and the members appreciated the opportunity of seeing it. The disease, which was first described by Pinkus of Berlin in 1907, was very rare, and, as he recalled the cases published, this one seemed to fit perfectly with the descriptions and the histologic picture, showing the granuloma, corroborated the diagnosis.

DR. W. J. HIGHMAN said that Dr. Sutton had sent him a slide that corresponded in every detail with the one presented by Dr. Trimble. It was interesting to know that there were now two authentic cases in the United States. Microscopically, a dense mass of round cells immediately under a thin epidermis was seen. The picture was characteristic, and after having once seen it one could not fail to recognize it again. The two specimens were almost exactly alike though they came from sources two thousand miles apart.

DR. B. LAPOWSKI said that a number of cases had been presented with that diagnosis although only two had been accompanied with a microscopic report. As he recalled the matter, many cases had been reported in the literature.

DR. W. J. HIGHMAN replied that only about thirty-five cases had been reported in the world's literature.

Dr. Trimble said that in this country the cases were uncommon. As he recalled it, Sutton has mentioned only one other case besides his own. Sometimes giant cells were found in the sections, though none were found in this one. He would try to find these cells in another piece of tissue. The diagnosis was made clinically and was later confirmed by microscopic findings; few would think a microscopic diagnosis necessary after having seen the published photograph.

NEW YORK DERMATOLOGICAL SOCIETY

Regular Meeting, Jan. 27, 1920.

George M. MacKee, M.P., *President.*

TINEA UNGUIUM. Presented by Dr. G. H. Fox for Dr. Howard Fox.

J. M., a full-blooded negress, aged 34, married, born in Cuba, who came to the United States about fifteen years ago, said the disease first appeared in the thumb nail of the right hand four years before presentation. During the following three years, all the nails of the right hand and foot (except those of the ring finger and fourth toe) became successively affected. On the back of the hand and wrist were some ill-defined, irregular, slightly thickened hyperpigmented areas. There was no evidence of paronychia. The affected nails in their entire extent showed marked dystrophic changes, being thickened, lusterless, brittle and of a dirty yellowish color.

Microscopic examination of scrapings soaked for two hours in 40 per cent. potassium hydrate showed an abundance of mycelia and spores. The patient had received one massive dose of roentgen-rays.

DISCUSSION

Dr. H. H. Whitehouse said he had seen several such cases of tinea of the nails with dry dermatitis of the palms, and had wondered if the two conditions were associated. One case had cleared up under Whitfield's ointment.

Dr. J. A. Fordyce suggested that some of these affections of the nails might be parasitic, secondary to dermatitis of the fingers, and if investigated might show the presence of fungi. It was surprising how large a number of such cases are now seen. Ormsby's article had thrown a great deal of light on them.

Dr. J. E. Lane agreed with Dr. Fordyce that the lesions on the hands were probably ringworm. Sometimes it was very difficult to demonstrate the fungi in these cases, and the fact that they had been demonstrated in the lesions of the nails tended to confirm the diagnosis.

Dr. G. H. Fox said that it was a typical case of parasitic disease. Most of the nails were greatly affected, and one not at all. If the lesions on the hands were seen alone, no one would consider the condition parasitic, but taken in connection with the condition of the nails it was most probably a fungus affection. It certainly was not an ordinary ringworm.

Dr. W. J. Highman said that since Ormsby's article was written he had reached the conclusion that most of the vesicular diseases of the hands and feet were due to some parasite. He could not say whether the claims made for Whitfield's ointment were correct, but most of these conditions cleared up under that treatment. From the work done by Sabouraud and others it seemed

probable that most of the nail conditions were caused by pyogenic fungi, not by the ordinary epidermophyton. They presented a fruitful field for further study. Many cases of so-called occupational dermatitis of the hands of the vesicular type were probably fungus infections, the soil having been made favorable for their growth by the constant maceration of the hands in water, etc. They stopped when the work ceased, for the soil was no longer favorable. Many of them recovered under the use of Whitfield's ointment.

Replying to an inquiry by Dr. Fordyce, the speaker said that he had not in mind the occupational diseases connected with the use of chemicals and physical agents, but that he found in the dispensaries a large number of women employed in housework that were so affected, and he thought a large number of the conditions were really fungus diseases.

Dr. F. Wise thought these lesions were probably due to the tinea fungus, but was inclined to believe that many men erred in thinking most of the vesicular and bullous diseases of the hands and feet were due to ringworm; many of the diseases were really pompholyx, often due to nervous conditions.

Dr. W. B. Trimble said that since this patient had ringworm of the nails he was inclined to think that the other lesions were also due to the same fungi. The hand lesions could easily be cured, though there would be recurrences due to reinfection from the nails. He had just treated a patient with a second attack, in which the mycelium had been demonstrated. This patient had the disease on the nails of both his great toes, and the second attack, on the dorsum of his foot and between the toes, was due to reinfection from the nails. It would be very interesting to find out how to cure the nail condition permanently.

Dr. F. Wise said that he had cured several cases of ringworm of the nail with roentgen rays.

Dr. G. M. MacKee said that since the articles by Sabouraud, Whitfield and Ormsby had been published, dermatologists quite agreed that many of the vesicular eruptions of the extremities were due to fungi, but it did not seem to be so well established that the patches of slight erythema and furfuraceous scaling of the trunk and extremities were not infrequently due to fungi. Such eruptions were not infrequently seen in connection with ringworm of the nails. Several cases of ringworm of the nails had been seen in Dr. Fordyce's clinic in which there was a slight erethymatosquamous eruption of the palms and soles and the backs of the hands, together with patches of a similar nature on the upper arms and trunk. Cultures made from these lesions were positive.

The speaker agreed with Dr. Fordyce in thinking that Dr. Highman's assertion was too sweeping. The mere obtaining of a growth on a culture medium was not sufficient to establish a parasitic cause for an eruption. The organism would have to be identified and excluded as an accident and found in other similar conditions before allowing it to assume an etiologic rôle. He was in accord with Dr. Lane relative to the difference in efficiency between the roentgen-ray treatment of so-called parasitic eczema and that of the nonparasitic variety. Irradiation was efficacious in both types, but much more so in the nonparasitic variety. He had been disappointed with his own results in roentgen-ray treatment of ringworm of the nails.

In reply to a question by Dr. Lane, the speaker said that the beta rays of radium would kill bacteria to the depth of 2 mm. in a culture. The gamma rays of radium and of the roentgen-ray would not do this. In the living tis-

sues, however, roentgen rays and gamma rays gave rise to beta rays, which in turn might have some effect on the bacteria or fungi.

Dr. F. Wise said that in the cases he had cured he had the patients use boric acid ointment day and night, securing an absolute maceration of the nails, and then gave them a unit or a unit and a quarter of roentgen rays once in four weeks.

Dr. W. J. Highman said the method he had found most successful in these nail cases was to have the patient scrape the nails once a day and paint them with a solution of 1 per cent. solution of mercuric chlorid in alcohol, and put 10 per cent. ointment of ammoniated mercury under the free edge. They usually cleared up under that treatment within from three to six months.

Dr. W. B. Trimble asked whether the recurrences were not always the same disease. It seemed that the lesions would clear up and reappear because not all the fungi had been killed.

ICHTHYOTIC CONDITION WITH ERYTHEMA (For Diagnosis). Presented by Dr. H. H. Whitehouse.

The patient, J. K., a boy, aged 10, was seen for the first time. No other members of the family were affected. The eruption exhibited had been present for six weeks, but there had been a similar attack a year ago. According to the boy's mother, however, the child had had an ichthyotic skin all his life. There was also present a keratosis of the palms and soles. The diagnosis seemed to lie between erythroderma ichthyosiforme, such as the case described by Drs. MacKee and Rosen, or some form of pityriasis rubra pilaris.

DISCUSSION

Dr. G. H. Fox said the diagnosis of ichthyosis would cover the whole ground.

Dr. W. J. Highman thought the condition was ichthyosis. The boy also had a dermographism and the whole skin was irritable. The two factors would account for the condition exhibited.

Dr. W. B. Trimble agreed with Dr. Whitehouse's supposition that the condition was an ichthyotic erythroderma and would probably go on to excess formation of corneous skin, as did the case of the young woman who had been exhibited at the Skin and Cancer Hospital. There were lesions in the axillae and other places where it was not common to see ichthyosis. It seemed to him to be an early case of ichthyosiform erythroderma.

Dr. G. M. MacKee said that the difference existing between ichthyosiform erythroderma and ichthyosis vulgaris depended on the conception one had of ichthyosis in general. Those who had a broad conception of ichthyosis and included in the ichthyosis group various ichthyotic conditions—such as xerosis, keratosis palmaris et plantaris, ichthyosis hystrix, etc.—were unable to see any essential difference between ichthyosis and ichthyosiform erythroderma. All the symptoms seen in the latter condition were found in ordinary ichthyosis, but hardly ever in one patient. Ichthyosiform erythroderma was recognized by the presence of a universal generalized erythema or an erythema occurring in patches—a thickened horny layer, and the usual symptoms of ichthyosis, such as inactivity of the sebaceous and sweat glands, etc. The eruption was practically universal, always involving the flexures; in fact, as a rule, the maximum of development was in those locations. In addition, there was usually a

history of rapidly growing fingernails and also of the scalp hair. The patient under discussion showed more or less erythema, the adult type of nails, the universal ichthyosis, maximum involvement of the flexures, keratoderma palmaris et plantaris and a seborrheic condition of the face and scalp. All these features combined to make a diagnosis of ichthyosiform erythroderma of the mild type probable.

Dr. W. J. Highman said that in keratosis suprafollicularis or pilaris there were two types, the white and the red forms.

Dr. G. M. MacKee replied that an erythematous skin was sometimes seen in ichthyosis vulgaris. This was known years ago as ichthyosis rubra. In some instances the erythema was persistent, in others intermittent, and in still others recurrent.

Dr. J. Kingsbury said that his conception was that there were recurring plaques of erythema and that these plaques would return from time to time. It was not a constant erythema, such as this boy presented.

Dr. G. M. MacKee replied that at times there was an exceedingly marked difference in all types of ichthyosis in summer as compared with that seen in winter. A skin that would show no more than a xerosis in the summer might present ichthyosis hystrix in midwinter.

EPITHELIOMA OF THE NOSE. Presented by Dr. J. Kingsbury.

The patient was a middle-aged man showing almost complete destruction of the nose. He had been under observation off and on for about sixteen years and was presented with a view to obtaining suggestions for treatment—as to whether the condition might possibly be benefited by radium treatment or had better be let entirely alone. It was evidently a very slow growing condition. The patient stated that it began as a small pimple on the tip of the nose. A small piece had been excised a year before.

DISCUSSION

Dr. J. E. Lane thought there would be temporary improvement from roentgen-ray treatment, or perhaps radium would be better. It was not impossible that a permanent cure might be effected, if the lymphatic glands were not involved.

Dr. J. Kingsbury replied that the point was the slow growth of the lesion. It began when the man was 30 years old.

Dr. G. M. MacKee thought that in view of the fact that the patient had not been irradiated there would seem to be an excellent opportunity of curing the condition with either roentgen ray or radium. The disease was deep-seated and associated with considerable induration, and it might require several intensive filtered treatments to bring about the desired result. Not infrequently in these cases the first two or three treatments effected an improvement, while further irradiation proved ineffectual. This was apparently due to the fact that the tissues acquired resistance against irradiation. In order to avoid this possibility and also to bring about a cure with the smallest possible amount of roentgen ray, the speaker suggested that the patient be placed under a general anesthetic and a thorough curettage done—this to be followed by an intensive application of either filtered or unfiltered roentgen rays. A second such treatment at the end of a month might not be indicated, but with this small amount of treatment a subsequent relapse would also be

amenable to further irradiation. Furthermore, no time would be lost and no injury done to the tissue. If, for instance, the result of one treatment was not a complete or almost complete clinical cure, then it would be wise to again curet and apply acid nitrate of mercury for fifteen minutes, in accordance with the technic advocated by Dr. Sherwell.

Dr. J. Kingsbury said that the course suggested by Dr. MacKee sounded quite feasible. The only thing he had had in mind was a radical operation or perhaps to let the condition entirely alone. It was very slow growing and would probably go on for several years without much more trouble than it was now giving.

Dr. J. A. Fordyce said he had had more experience with trichloracetic acid and thought it better than acid nitrate of mercury. The latter agent had less penetrating power.

Dr. G. M. MacKee, in answer to a question by Dr. Fordyce, said that the only way the acid interfered with roentgen-ray treatment was through the production of a crust. If the roentgen ray were applied before the application of the acid or before the formation of the crust, then there would be no interference. Replying to a question by Dr. Wise, the speaker said that the application of an acid or of any irritant would make the skin more susceptible to irradiation and would enhance the effect of the roentgen ray, but in a case of epithelioma it would not be necessary to reduce the amount of rays administered because in the treatment of such a condition a little more or less reaction made little difference. In treating other conditions, however, the fact brought out by Dr. Wise would be an important one.

GLOSSITIS. Presented by Dr. F. Wise.

C. H., presented from Dr. Fordyce's clinic, man, aged 51, whose wife had never been pregnant, had had gonorrhea thirty years before presentation but no chancre that he remembered. The condition seemed to be an interstitial glossitis. On the right side of the tongue were several barley-corn sized nodules which suggested a beginning epithelioma. These nodules had flattened out somewhat since the administration of arsphenamin and mercury.

DISCUSSION

Dr. J. A. Fordyce regarded the condition as a smooth atrophy of the tongue. It was difficult to say whether the nodules were beginning epithelioma or were specific lesions. One did not often see epithelioma begin in this manner.

Dr. J. E. Lane said that as the nodules had lessened in size since the injection of arsphenamin he thought a diagnosis of syphilis, not epithelioma, could be made, as there was now practically no appearance suggesting epithelioma.

Dr. G. H. Fox said that on a hasty examination it did not impress him as likely to be an epithelioma; it was more likely to be specific.

Dr. G. M. MacKee said that most of the cases of this kind that had been presented at the Manhattan Dermatological Society and at the Dermatological Section of the Academy of Medicine had been shown as examples of epithelioma developing on a gumma. Arguments for and against this possibility had been going on in the local societies for a number of years. The speaker had never seen an epithelioma develop on a gumma of the tongue, but had

seen it develop on leukoplakia, interstitial glossitis, smooth atrophy and in a scar left by a gumma, but he had never seen the epithelioma develop during the presence of the gumma.

Dr. H. H. Whitehouse asked Dr. Winfield about a case of epithelioma of the nose on an ulcerating basis in which arsphenamin had been given and which healed to a certain degree but failed to heal any further and the patient still had a ++++ Wassermann reaction.

Dr. J. M. Winfield replied that he had had another case of gumma of the skin over the buttocks and they all healed under arsphenamin treatment except one which was epitheliomatous; finally, after a surgical operation the patient recovered.

Dr. J. A. Fordyce said that cases of gumma of the tongue were not common, and he cited the case of a patient seen some years before which healed under treatment and later the patient developed an epithelioma at the site of the gumma; but whether or not it had healed before the epithelioma developed he could not say.

Dr. W. J. Highman told about the case of a syphilitic man with an epitheliomatous lesion on the tongue, who was given arsphenamin at the urgent request of his physician. The epithelioma grew rapidly. It was in a very advanced state when the treatment was started, and it was given with the idea that having the combination of gumma and epithelioma he might be relieved of the one by antisyphilitic treatment. The speaker said he did not think comparison could be made as to the rapidity of growth of a tongue epithelioma during the pre-arsphenamin and the arsphenamin days. As Dr. Fordyce had said, we have not yet had sufficient experience. It was, however, conceivable that an epithelioma beginning and growing slowly in scar tissue—the growth being held in check by the scar tissue—might, with the check removed by arsphenamin treatment, spread more quickly; that, however, was only a theory.

Dr. W. B. Trimble remarked that if arsenic could cause a keratosis on a glabrous skin it might also cause considerable proliferation of a lesion in the mouth. All were familiar with the fact that arsenic in the form of arsphenamin would on occasions produce an exfoliating dermatitis, and in the pre-arsphenamin days arsenical keratosis was also familiar. The latter condition, as Hutchinson had pointed out, at times degenerated into epithelioma. These facts might have some bearing on the question asked.

ERYTHEMA PERSTANS. Presented by Dr. J. M. Winfield.

A girl, aged 19, had consulted the speaker for a persistent redness of the chin, cheeks, and forehead that began in June as a number of small acne-like papules on the chin and right cheek. The papules were rapidly followed by redness and swelling, which soon involved the chin, both cheeks and forehead. There was no history of infection. Her family physician, who was consulted when the inflammation began to spread, evidently thought the disease was erysipelas for he painted the margins with tincture of iodin, which had no effect. Later, he scarified one cheek and applied ichthyol ointment; this seemed to aggravate the trouble. When Dr. Winfield first saw the case, the skin was smooth, shiny and of a bright red color; there was no scaliness until after the application of lotio alba. The patient seemed to be in perfect health, her menstruation was normal, and she had never before had any skin disease.

DISCUSSION

Dr. H. H. Whitehouse said that from the manner in which it spread and from the raised border and the definite symmetry it seemed to be an early case of lupus erythematosus. It would be interesting to watch the case with that in view. It seemed to be more than an erythema perstans. If it was of the superficial type, it might respond to iodoform internally and lotio alba externally. He had seen cases disappear entirely under 1 grain of iodoform three times a day. In the thickened discoid type, however, it had no effect whatever.

Dr. J. A. Fordyce agreed in the main with what Dr. Whitehouse had said, that it was probably a superficial lupus erythematosus.

Dr. J. E. Lane agreed with Drs. Whitehouse and Fordyce that the case was probably lupus erythematosus.

Dr. W. J. Highman said that it suggested the type described by Kaposi as erysipelas perstans faceii which might lead to death or become a chronic discoid or ordinary disseminated type or, at times, the discoid form of lupus of the face. In the last analysis, however, it would be necessary to watch the patient for a few weeks before determining whether or not it was a lupus, as seemed possible and, if so, what form it was. He had recently seen a young woman with a circular lesion on the left cheek associated with a pale discoid lupus erythematosus on the nose. The lesion on the cheek resembled a typical scaling ringworm and the patient complained of a curious band-like headache, suggesting a frontal sinusitis. She was referred to a laryngologist, who found an empyema of the antrum of Highmore which he relieved surgically, and the lesions on the face disappeared spontaneously. The speaker said he was not an ardent advocate of the theory of focal infection but it was possible that the condition of this patient was a skin reaction and might have one of several remote causes; therefore he had examined her systematically with that in mind.

Dr. W. B. Trimble agreed with what Dr. Highman had said and expressed the opinion that it was a superficial type of spreading lupus erythematosus.

Dr. G. M. MacKee said that if the patient had on the scalp or had had on any part of the body an undoubted lupus lesion the eruption that she exhibited on the face would unquestionably be regarded at once as representing an acute superficial lupus erythematosus.

Dr. J. M. Winfield said that when the girl first came under his observation the skin covering the chin, cheeks and forehead was smooth and shiny and of a bright red color, with a marked whiteness under the chin and around the nose. There seeming to be no indication for local treatment, nothing but an external application (lotio alba) was prescribed. He at first thought of lupus erythematosus, but on further study of the case could not bring his mind to accept that diagnosis; its resemblance to other cases of erythema perstans has caused him to present the case as one of that disease.

ACUTE PSORIASIS AND ZOSTER. Presented by Dr. J. M. Winfield.

The patient was a young woman who had had a number of attacks of psoriasis that had been treated at the Skin and Cancer Hospital. The present attack had lasted about three weeks and began during an attack of tonsillitis. The eruption consisted of small scale-covered papules distributed over the trunk, thighs and arms. In an artificial light the eruption resembled a papulo-squamous syphilid. When the eruption appeared she began taking large doses

of Fowler's solution of arsenic, which undoubtedly accounted for the attack of zoster that began about ten days after beginning the arsenic. The lymph nodes were enlarged.

The patient was shown because of the occurrence of zoster during an attack of psoriasis, and also on account of the peculiar type of the psoriatic eruption.

DISCUSSION

Dr. H. H. Whitehouse said that undoubtedly it was a psoriatic case; the patient might also have syphilis and should be examined with that in view.

Dr. J. A. Fordyce said that the eruption might have been due to the arsenic —an arsenic eruption.

Dr. J. E. Lane said that undoubtedly the patient had all the diseases for which she was presented. It was extremely probable that all of the generalized eruption was psoriatic, yet this in some places was so suggestive of secondary syphilis that it would not be amiss to have a Wassermann reaction made. The absence of lesions on the mucous membranes added to the improbability of the syphilitic nature of any of the lesions.

Dr. W. J. Highman thought it was impossible to rule syphilis out from the condition presented, and expressed interest in knowing the final outcome of the case.

Dr. F. Wise could see nothing in the case except psoriasis and herpes zoster.

Dr. J. Winfield said the condition of this patient reminded him of one he had treated last year. A young woman had had what her family physician called follicular tonsillitis; two weeks after the throat symptoms had subsided, a generalized scaly eruption appeared over the body. The left tonsil was enlarged and indurated. Although the Wassermann reaction was negative, the induration of the tonsil and the syphilitic appearance of the eruption made it seem advisable to put the patient on antisyphilitic treatment; the treatment, however, had no effect on the eruption although the swelling of the tonsil disappeared. The Wassermann reaction remained negative. Six months after the beginning of the eruption, frank patches of psoriasis appeared. The patient gave a history of a number of attacks of psoriasis. The present attack was preceded by a sore throat, and the eruption was somewhat different from that in the other attacks.

Dr. Winfield said he had seen so many cases of acute psoriasis following tonsillar affections that he was strongly of the belief that there must be some direct relationship, between some forms of tonsil infections and psoriasis.

LUPUS ERYTHEMATOSUS IN A MAN OF 45. Presented by Dr. W. J. Highman.

The patient was presented from Dr. Fordyce's clinic and was a married man of 45, who had six children. The condition began in April of last year on both sides of the nose and spread all over the face.

The diagnosis was accepted without dissent.

LEPROSY. Presented by Dr. J. Kingsbury.

The patient, a native of Morocco, was a middle-aged man and had spent some time in France. It was not certain how long he had had the condition, but he exhibited the leonine expression and other characteristics of the disease.

DISCUSSION

Dr. J. M. Winfield remarked that the patient had a well developed ulnar nerve.

Dr. G. M. Fox said that years ago he saw a number of cases of leprosy improve under chaulmoogra oil, but that at the time he was in doubt whether it was the oil or the change of climate that caused the improvement. In his opinion, most of the patients that came to New York improved, if they were not scared to death, as some were.

Dr. J. M. Winfield said he had used the chaulmoogra-resorcin combination in a number of cases and all of the patients had received more or less benefit. He had been able to follow two patients for two years after leaving the hospital. One, a West Indian colored woman with mixed leprosy had apparently recovered after a year's treatment; sensation had returned in some of the anesthetic patches and there had been no new symptoms in two years. The other was a Japanese with nodular leprosy, who had been treated for a year, with apparent recovery. All of the lesions healed and there had been no recurrence since leaving the hospital in the fall of 1918. All of the patients would sometimes have painful nodes after the injections, but these usually subsided in a week or so. In the case of the Japanese, the injections were given every three to five days in doses varying from 5 to 60 drops. Several times he suffered severe systemic reactions.

Dr. J. Kingsbury asked whether any of the members had tried arsphenamin with leprosy.

Dr. W. J. Highman said it was a waste of arsphenamin.

Dr. J. M. Winfield said he had given a patient a number of doses with no effect whatsoever.

EXTENSIVE KELOIDAL SCARRING AFTER A BURN. Presented by Dr. F. Wise for Dr. J. A. Fordyce.

Jerome B., aged 6, was presented from Dr. Fordyce's clinic. Five months before he set fire to his clothes with firecrackers and was severely burned over his back and right arm. He was treated with neutral solution of chlorinated soda at a hospital, but the healing was followed by extensive hypertrophic cicatrices resembling keloids. There was one isolated keloidal mass on the left side of the back of the neck, that extended anteriorly to the middle of the right clavicle. The larger keloid began at the inner side of the left scapula, then extended downward, involving the entire right side of the back and also the left lumbar region. There was also a keloidal mass on the inner side of the right arm.

DISCUSSION

Dr. G. H. Fox remarked that many cases which had been reported as keloids were simply hypertrophic scars with none of the nature of keloid.

Dr. J. A. Fordyce said he could not grasp the distinction between keloid and hypertrophic scar.

Dr. G. H. Fox replied that one was hard and painful, and the other would flatten down in time and could be easily destroyed without danger of recurrence, as in true keloid.

Dr. H. H. Whitehouse remarked that the theory of spontaneous keloid formation had been abandoned. If there was any virtue in the roentgen ray treatment, why not try it here?

Dr. G. M. MacKee said that if the roentgen ray were judiciously applied it would flatten the band down to a level with the niveau of the skin. The redness would persist for some months after the keloidal condition had disappeared, but it would eventually disappear. The sooner after the accident the lesions were treated the more readily they would respond. The mother, of course, was making a great mistake in waiting.

NEW YORK DERMATOLOGICAL SOCIETY

Regular Meeting, Feb. 24, 1920

George M. MacKee, M.D., *President*

HODGKIN'S DISEASE ASSOCIATED WITH CUTANEOUS TUMORS.

Presented by Dr. Howard Fox.

A. H. A., a man, 30 years of age, born in the United States, a grocer's clerk, was presented before the Society through the courtesy of the U. S. Public Health Service. As an ex-soldier he was being treated at the Polyclinic Hospital. When a child, he had suffered from measles, mumps and diphtheria. In 1911 he had had malaria, and in 1918, influenza and pneumonia.

The condition for which he was presented was first noticed in January, 1919, as small marble-like lumps in the neck and scalp. In December, 1919, a gland was removed from the groin and from a histologic section a diagnosis of Hodgkin's disease was made, several Reed cells being found in the preparation. The patient now presented enlargement of the post-occipital glands and to a slight extent, of the axillary and inguinal glands. The blood picture was: hemoglobin, 75 per cent.; red cells, 5,660,000; leukocytes, 6,600; polymorphonuclears, 27 per cent.; eosinophils, 1; large mononuclears, 2; transitionals, 2.

On the scalp and part of the forehead were numerous firm, hard, elevated, smooth, painless, dull red tumors. The patient was a man of medium size, well nourished. Twice recently while in the hospital, his temperature had risen to 101 F. Histologic examination of a section of one of the tumors of the scalp (made by Dr. Walter J. Highman) showed the tumors to be lymphogranulomatosis. (A full report of this case will appear in a later issue of the Archives.)

DISCUSSION

Dr. Trimble expressed his interest in the case. Although the tumefactions and infiltrated areas of the scalp strongly resembled mycosis fungoides clinically, it was known definitely that the man had Hodgkin's disease; therefore it was his belief that the skin lesions also were those of Hodgkin's disease. He had seen one other case of this nature—also in a man—which had been presented to the Section on Dermatology at the New York Academy of Medicine about a year and a half previously. In that case, the skin lesion was about the size of the palm and bore a resemblance to lupus; no distinct lupus tubercles were found, though the lesion had the coppery hue of the flat, smooth, infiltrated type of lupus vulgaris. The skin lesion had developed following

the surgical removal of a gland in the neck. The patient had been suffering from Hodgkin's disease for some time before the lesion developed.

Later a biopsy proved it to be pseudoleukemia cutis. His only reason for citing this case was that the condition did not look anything like the condition under discussion. It was, however, the granuloma type of Hodgkin's disease of the skin. He was very glad to have had an opportunity of seeing another clinical type of this condition and would look forward with interest to Dr. Fox's pathologic report.

Dr. Winfield said he had seen a case several years ago. The patient had a number of lesions similar to those in Dr. Fox's case. At first it impressed him as being mycosis fungoides, but there were a number of enlarged glands and these were examined and pronounced to be Hodgkin's disease.

Dr. E. A. Reed, U. S. Public Health Service (by invitation), said that he had seen five cases of Hodgkin's disease in ex-soldiers, and none complained of itching or presented true dermal lesions.

Dr. Trimble said that one of his assistants (Dr. Fraser), in a paper on the pathology of mycosis fungoides, had called attention to one case in which the skin lesions were identical with mycosis from a clinical standpoint, and the microscopic picture was that of Hodgkin's disease.

Dr. Winfield inquired whether Dr. Fraser had not reported five or six of these cases.

Dr. Trimble replied that Dr. Fraser's paper was based on six or seven cases of mycosis fungoides, though, as he remembered it, only one was of the nature just referred to.

Dr. Wise asked whether Dr. Fox recalled a case presented by Dr. Parounagian before the Manhattan Dermatological Society which turned out to be lymphogranulomatosis cutis. If Dr. Highman had the sections in the laboratory, it would be interesting to compare the microscopic findings in this patient.

Dr. Howard Fox, replying to Dr. Wise, said he had no distinct recollection of Dr. Parounagian's case. In this instance, the diagnosis would have to wait for the histologic report as it appeared impossible to make a differential diagnosis clinically between mycosis fungoides and a lympho-granuloma of Hodgkin's disease. The number of cases of the latter type recorded in the literature was very small.

PITYRIASIS RUBRA PILARIS. Presented by Dr. Trimble.

D. B., aged 13, stated that he had a hyperkeratosis of the palms and soles since early childhood. In July, 1919, he suffered a severe burn from contact with a third rail on which he fell from the elevated platform. He stated that the eruption on the body had since appeared. He presented several aggregated patches of acuminate papules on the trunk, mostly around the axillae and pubes. On the backs of the hands were follicular acuminate lesions pierced by broken hairs. On the trunk were a number of individual papules at the periphery of the patches. The boy showed evidences of some pituitary disturbance. The case had been presented from the speaker's service at the University and Bellevue Clinic by Dr. Bechet at the January meeting of the Section on Dermatology and Syphilis of the New York Academy of Medicine.

DISCUSSION

Dr. Williams said that some of the crusts said to be the result of burns resembled an ulcerating circinate syphilid more than any burn he had seen. The case was a curiosity.

Dr. Ketron (by invitation) said he had not seen many cases of this disease, but it was not his impression that it occurred in circumscribed patches as in the case presented but was more of a generalized infiltration of the skin.

Dr. Winfield said that the first patient he had ever presented before the New York Dermatological Society had these circumscribed patches, very much like ichthyosis.

Dr. Wise said that most of the cases of pityriasis rubra pilaris were generalized but had clear areas of skin between the plaque lesions; the patches were usually more or less rounded—that is, in the typical cases of the disease. In this instance, it would be wrong to ignore all the other conditions presented by the boy. He was, of course, a dyspituitary patient, and one of the men at the Academy meeting asserted he had cured a case of pityriasis rubra pilaris with no evidence of endocrine pathology, by the administration of pituitary extract. If that was true, one would be much more justified in treating a patient like this one with ductless gland extracts to see whether or not they would have any effect on the skin condition.

Dr. Winfield said that two or three years ago Dr. Sherwell was very enthusiastic about treating such cases with the pituitary gland. In the pityriasis cases he derived some benefit from using the pituitary extract. Such treatment seemed indicated in this case.

Dr. Trimble said that Dr. Ketron's query had already been answered. In most of the cases seen in New York the lesions occur in large patches, and it is only after the patients have been affected for many years that it becomes almost universal. In his opinion the case might be considered as generalized, since the lesions were scattered in different places over the body. The patient would probably have the condition all his life unless the treatment suggested should help him.

EPITHELIOMA OF THE PENIS: HEALED BY CURETTAGE AND ACID NITRATE OF MERCURY. Presented by Dr. Trimble.

A man, aged 62, presented himself at the clinic for the first time in 1913 with an epithelioma of the glans penis. At that time the lesion was about the size of a 10-cent piece and was superficial, ulcerating in the center, with no distinct border; it was situated on the upper surface of the glans, midway between the meatus and the corona glandis. The duration of the condition was six months. Even though the duration was long, it was natural to suspect a venereal ulcer in this location, and consequently the man was put through various tests. The Wassermann reaction was negative. Local treatment and rather intensive treatment with mercury and iodid of potash had no effect. Biopsy proved the case to be epithelioma.

The patient refused amputation, and after a time the operation of curettage and cauterization was performed. An especially good result was obtained. The patient was presented to show the result of treatment seven years after operation. The scar was smooth, there were no glands, and the patient was apparently cured; what would happen, no one could say.

During the last two years the patient had developed a number of small papules on his nose and along the hair line over the ears. These papules were slow in development, necrotized in the center and left scars. The diagnosis of this condition was acne necrotica. On account of the skin affection of the nose, another Wassermann test was made, which proved to be negative.

DISCUSSION

DR. WILLIAMS said that the case presented a most excellent result of the treatment of epithelioma. When the patient was presented at the Academy of Medicine for the acne varioliformis, he had noted papules on the nose but they were not hard and firm and seemed rather superficial to sight and touch, and it appeared to be rather an early case of rhinophyma in which the lesions and atrophy were quite limited; but it did not seem to be acne varioliformis. As the condition had cleared up without treatment, he adhered to his original diagnosis.

DR. WISE said that, basing his experience on two analogous cases, he agreed with Dr. Trimble that probably the man did not have syphilis. The scars on the nose might be produced by acne varioliformis. He repeated his opinion that Dr. Trimble's diagnosis was correct.

DR. MACKEE said that both Dr. Trimble and the patient were to be congratulated on the splendid result. In his own opinion, any one of several therapeutic measures, if properly applied, would effect a local cure in cutaneous squamous-cell epithelioma. The chief requisite was to diagnose and treat the lesion before metastases occurred. In some instances a lesion of metastatic cancer might grow to considerable proportions before invading the lymphatics. Conversely, metastasis might occur during an early stage of evolution. Furthermore, the metastatic nature of the growth might not be revealed for two or three years subsequent to local cure.

On account of the grouping, the lesions on the nose suggested the possibility of an ulceronodular syphilid. The eruption probably represented an acne varioliformis, but the possibility of syphilid should not be ruled out definitely.

DR. TRIMBLE said that the diagnosis was absolute, so far as the penis was concerned, and in his opinion the lesions on the nose were those of acne necrotica.

MANHATTAN DERMATOLOGICAL SOCIETY

PAUL E. BECHET, M.D., *Chairman*

Regular Meeting, Feb. 10, 1920

BLASTOMYCOSIS (?). Presented by DR. OCHS.

S. M., a woman, aged 23, single, born in the United States, a dressmaker, presented on the anterior surface of the lower third of the left leg a somewhat sharply defined papillomatous area about the size of a dime; adjacent to it was another but smaller papulopustular area with central papillae which were greatly hypertrophied. When the skin was pressed, a purulent discharge came from many different points, especially from between the papillae. The borders of the patches were slightly elevated, moderately infiltrated, and slightly red. The condition had begun about eight weeks before as a small papule, which

quickly broke down, discharging pus. A second one appeared a week or so later, and since then another lesion had appeared on the leg. There was nothing on the body. The patient stated that she had taken three headache powders about a week before the condition appeared; they were somewhat salty in taste.

Dr. Ochs said that the condition was very similar to that of a colored woman whom he had presented, with lesions on the back of the foot. On account of the papillomatous condition and the rapidity of development, he presented the case with a tentative diagnosis of blastomycosis. There had not yet been time to study the case microscopically.

DISCUSSION

Drs. Wise and MacKee thought it was a bromid eruption.

Dr. Wallhauser also was inclined to the diagnosis of bromid eruption, but would not rule out blastomycosis without a microscopic examination.

Dr. Rosen said that before making a diagnosis of bromid eruption, a blastomycosis or ringworm infection should be ruled out. The patient had taken one or two powders some time ago, but what drugs were contained in them she was unable to state. It was unusual for a bromid eruption to appear two months after the ingestion of such a small quantity, granting that the patient had taken the drug.

Dr. Bechet agreed with Dr. Rosen in questioning the diagnosis of bromoderma. The case certainly resembled a blastomycosis. The possibility of the lesions being tinea profunda should be taken into consideration.

Dr. Ochs said that he had seen the patient only once before presenting her and that he had definitely stated that it was only a tentative diagnosis. The patient had said nothing to him about having taken headache powders, but stated she had taken no medicine. Evidently the diagnosis lay between these two conditions; but the newer lesion appeared six or seven weeks after the first. The location was not an unusual one for blastomycosis, as it might appear on the lower extremities, especially in women, as one of the textbooks stated. Also the description of the case fitted blastomycosis rather than bromoderma. In bromoderma he had not been able to find pus exuding from the lesions. He would, however, endeavor to find out what the patient had been taking and report on the case later as to whether or not blastomycetes were found.

LUPUS ERYTHEMATOSUS. Presented by Dr. Levin.

Mrs. D., aged 45, with two living children, who had been presented previously at a meeting of the Academy Section, about five years ago had had a lesion on the scalp which now involved the scalp and affected the lower lip. The treatment which had been applied might have had something to do with the appearance presented.

DISCUSSION

Dr. Wise said that the lesion on the lip made him sure of the diagnosis, and the distribution also favored lupus erythematosus.

The diagnosis was accepted without any dissent.

GEOGRAPHICAL TONGUE (?). Presented by Dr. Wise.

A. B., a girl, aged 10 years, from Dr. Fordyce's clinic, was first seen five days before since when the lesion had somewhat diminished in size. The

lesion was on the right side and dorsum of fthe tongue and consisted of ulcerated spots which had been there, sometimes better and sometimes worse, for four years. There were no jagged teeth to account for the condition and there was no pain. The diagnosis seemed to rest between geographical tongue and the so-called lozenge-shaped plaque of the French.

DISCUSSION

DR. WALLHAUSER agreed with the diagnosis of transitory benign plague. The lesion was circular and the border interrupted as though disappearing.

DR. OCHS thought it was a case of geographical tongue. It was very similar to the case of the woman he had presented in October. He thought, however, that the history was faulty. These lesions appear and disappear.

NEURODERMITE. Presented by DR. WISE.

A negro man, from the service of Dr. Fordyce at the Vanderbilt Clinic, who had appeared for the first time that day, presented lesions on both sides of the back and on the inside of the thighs. The diagnosis seemed to rest between neurodermite and lichen planus, and the patient was presented for inspection and for decision as to the propriety of either diagnosis. Small aggregate polygonal papules appeared on both sides of the neck and thighs. The papules were shiny and glistening, slightly raised, some showing umbilication. No eruption was present in the mouth or on the penis.

DISCUSSION

DR. OCHS agreed with the diagnosis of neurodermite and ruled out lichen planus entirely. He had before called attention to the fact that in colored people, as a rule, the lesions of lichen planus can be distinguished—being semi-depressed and quadrangular, and having a hyperpigmentation around the edge. In this case there were no lesions anywhere that suggested lichen planus, and the color for lichen planus was lacking.

DR. MACKEE disagreed with the diagnosis and expressed the opinion that Brocq's interpretation of neurodermite was too broad, for Brocq included under that heading lichen planus with mosaic formation. While he disagreed with the diagnosis, he was willing to admit that the eruption might develop into that condition. The diagnosis would be proved by biopsy, but he had not seen a case of neurodermatitis in which the lesions were at first distinctly papular and then formed a mosaic as in lichen planus. It did not seem necessary to consider neurodermite. Contrary to what Dr. Ochs had said, the upper and inner part of the thighs was a favorite location for lichen planus, and the patient had there what to the speaker appeared to be typical lichen planus lesions—some of them distinctly umbilicated, etc. Clinically, he would consider this a case of lichen planus with mosaic formation.

DR. OULMANN disagreed with the diagnosis. The follicular lesions on the neck did not correspond to lichen simplex chronicus. There were also follicular lesions under the axillae, and in the groin such as are seen in eczema of those regions.

DR. MACKEE said that circumscribed neurodermatitis, as he understood it, began with itching. In this case the condition began as papules and ended with lichenification and itching, exactly the opposite course—unless one accepted Brocq's very broad designation.

DR. WISE said that a biopsy report would be submitted at the next meeting.

PARAFFINOMA. Presented by Dr. Kingsbury.

A woman, who presented numerous large tumors of the face, had been given antispecific treatment and had also been treated for sarcoid by a well known physician. The patient stated that some years ago she had been treated by a beauty doctor and that the face had been swollen since April, being sometimes better and sometimes worse. Dr. Kingsbury said that he did not place much reliance on the history given, and that he considered it a case of paraffinoma.

DISCUSSION

Dr. Wise said that about fifteen years ago a similar case appeared at the Post-Graduate Hospital, and later the woman developed a sarcoma from the paraffin tumors, of which she soon died.

Dr. MacKee agreed with the diagnosis of paraffinoma on account of the location and the appearance of the lesions. By persistent pressure one could get a thinning of the paraffin, which comes with edema. Surgery was often invoked to overcome such conditions, but it did not often prove satisfactory because of the connective tissue network rendering it impossible to remove the paraffin without enormous destruction, causing the patient to look as bad after the operation as before.

Dr. Rosen doubted the diagnosis of paraffinoma. The patient might have had paraffin injected, but according to her statement that was done eleven years ago, and it was difficult for him to understand why such a process should remain quiescent for ten and a half years and then appear as hard edematous masses. It seemed probable, as Dr. Wise had suggested, that the condition was a rather slowly developing sarcoma.

Dr. Gilmour recalled the case of a boy, seen years ago in the Roosevelt Clinic, who gave a history of paraffin injection for depressed cheeks and who presented the appearance of having a marble in the tissue of each cheek. An incision was made from the inside of the mouth and an attempt made to remove the foreign material from the meshwork of tissue. It was not a solid mass but came out like rice grains. The condition was improved by the operation. In the present instance he thought the effect of persistent pressure was due to the secondary edema rather than to the filtering of the paraffin itself. In the case he had referred to, the masses not only looked like a marble but also rolled around under the finger like a marble.

Dr. MacKee said that the paraffin was simply a foreign body which might remain harmless for years and then set up an inflammation. Two years ago, a patient in whom the result was satisfactory from her point of view, as the injection had overcome the wrinkles, had consulted him, but some time later the tissues rebelled and inflammation resulted.

Dr. Bechet said the sharply marginated, boardlike infiltrations did not look like sarcoma, and the lesions were too diffuse and uniform in distribution for that condition.

Dr. Satenstein said that when paraffin was injected for beauty work, usually small quantities were injected, just enough to fill out the depressions. There must have been a paraffin injection here, but the woman said that two years ago she had had all kinds of applications put on her face. The condition now seemed to be a distinct sarcoma as the result of a foreign body in the tissues.

Dr. Rulison (by invitation) said that at different times and at different intervals there was marked edema so that it was almost impossible for the patient to open her eyes. Underlying the edema were rocky masses. The edema at the time of presentation was slight; it might not be significant since it was markedly variable.

Dr. Kingsbury expressed the opinion that the edema was entirely dependent on the inflammatory changes produced by the foreign body. The coming and going, or the increase, was a purely mechanical condition secondary to the foreign body. As Dr. Satenstein had said, not much paraffin was usually injected, but the tumors form around the foreign bodies, and if one cuts into the lesions one gets the little granules of paraffin with this fibrous tissue change around them. The possibility of malignancy occurring in this condition was to be considered seriously. Although he was hardly prepared to accept the diagnosis of malignancy now, it was possible that a malignant change might occur. At present, the condition seemed to be simply paraffinoma.

GUMMA OF FOREHEAD. Presented by Dr. Parounagian.

V. C., aged 24, a woman, born in the United States, who gave a negative family history, had been married ten years. One child had died at the age of 1 week, and she had had one miscarriage at four months. She had been operated on for appendicitis after the miscarriage. She also said that she had had inflammatory rheumatism six years ago, and an operation for gallstones four years ago. In February, 1919, she bruised her forehead against a door. About December 10, a small red pimple appeared at the site of the bruise. The lesion was about the size and shape of the head of a match. She opened the lesion with a safety pin and squeezed out clear serum. Following this, the sore spot grew rapidly. She consulted a physician twice, without improvement. Then she visited a west side dispensary where she was given a lotion, and a Wassermann test was made. She was then referred to the Bellevue Clinic with the statement that the Wassermann reaction was ++++. Another Wassermann test, made February 6, had not been reported on. She was given one dose of neo-arsphenamin, 0.45 gm., on February 9.

DISCUSSION

Dr. Gilmour suggested the possibility of periostitis. The pain was greater at the base of the lesion than at the top.

Dr. Kingsbury said there was a large group of papules at the border, and it seemed probable that the woman had a papular syphilid of the forehead which became infected; the lesion did not seem to be a true gumma.

Dr. Gilmour said that an infection existing for that length of time would have been more broken down. He had seen several higher up on the forehead, but the patients were in a surgical clinic.

Dr. Parounagian said that so far as the location was concerned it was typical. He had seen several gummatous lesions in that location. The patient's description of the manner in which the lesion began might not suggest it; nevertheless he still regarded it as a gumma. No doubt there was periostitis accompanying the lesion and some pyogenic infection as well. The Wassermann reaction was ++++. She was first seen on Friday when a mercury injection was given, and arsphenamin was administered Monday. After the arsphenamin injection, the lesion became aggravated. No local application had been made. He hoped to present the case again at the next meeting.

ERYTHEMA PERSTANS. Presented by Dr. Wise.

M. C., a boy, aged 9, from Dr. Fordyce's clinic, whose condition was of three years' duration, with intermissions, and who had been presented more than a year ago at one of the meetings, presented a widespread eruption over the face and trunk, consisting of slightly edematous, smooth, isolated and coalescing areas that varied in size from a dime to areas several inches in diameter. The color also varied from light to dusky red. There was a remarkable resemblance to adult mycosis fungoides. The right eyelid was also involved. This was the fourth appearance of the eruption in the child, the lesions becoming scaly and pigmented before disappearing.

Dr. Wise said that the rash which the boy exhibited at the time of the presentation was the result of phenolphthalein, which he had been taking. The mother had stated that when he took a dose there was a recrudescence of the lesions. Dr. Abramowitz had written an article on the subject of phenolphthalein rash.

EPITHELIOMA (?). Presented by Dr. Wise.

G. F., a negro, aged 47, from Dr. Fordyce's clinic, on entering the clinic for the first time about a year ago, presented a lesion which was covered with various applications so that it was impossible to get a clear view of it, and at the clinic they were undecided as to whether it was a basal cell epithelioma, a lupus, or some other condition. The probability of its being a basal cell epithelioma seemed greater now than before; however, the edges of the lesion had not the pearly character that one would expect. The biopsy report would be submitted at the next meeting.

DISCUSSION

Dr. Satenstein said it was either an epithelioma or a broken down gumma. The man gave a history of having had a nodule which remained stationary for more than two months, then broke down and had been growing larger since.

Dr. Gilmour asked why, if there was a nodule which had been there for two months and which had then broken down, one could not have a nodule, not necessarily from a broken down gumma, but perhaps from an inverted hair in the lesion acting as a foreign body.

Dr. Parounagian did not agree with the diagnosis of epithelioma on a syphilitic base, but thought it was a clean cut epithelioma.

Dr. MacKee thought epithelioma the most likely clinical diagnosis; and until it was verified microscopically he saw no reason for bringing gumma into the discussion. He had never seen an epithelioma develop on a gumma, though he had seen an epithelioma on a scar from a gumma.

ARSENICAL PIGMENTATION. Presented by Dr. Parounagian.

E. D., woman, aged 35, a Roumanian seamstress, who had been married for fourteen years, with a negative family history, said she had had pneumonia at the age of 14, three attacks of erysipelas, and pleurisy. One child had died at the age of 5 weeks in 1906. She stated that the child was covered with a "white rash" around the mouth. She had two subsequent miscarriages, one at two months and one at less than two months. She had been separated from her husband for the past seven years. For fifteen years, she had suffered from

severe frontal headaches at irregular intervals, often accompanied by nausea and vomiting. In December, she came to Bellevue Clinic and was admitted to the wards for ten days. A blood test made at that time was positive. She received one arsphenamin treatment while in the hospital. In the outpatient clinic she had received three arsphenamin and two mercury treatments. The last arsphenamin treatment was given on January 15. Two days later, a rash appeared, which was at first localized on the hands and feet and later became general. The rash had persisted for three weeks. The eruption was very itchy, but never moist. The feet were now peeling. The pigmentation was very much more distinct in daylight than by artificial light.

DISCUSSION

DR. ROSEN said he thought it was very remarkable that with all the arsphenamin injections that had been made in the last eight or ten years there had been so few arsenical pigmentations from the enormous amount of arsenic that patients had been receiving. He doubted if this pigmentation would be permanent; it would probably be absorbed in the course of a few months.

FOR DIAGNOSIS. Presented by DR. OULMANN.

F. D., man, aged 37, of Italian descent, a junk dealer, who had been dismissed from service in France for about a year, about eight weeks before presentation, although a healthy young man with no venereal history whatsoever, developed what he called a pimple, which broke down, increased in size, and formed a deep ulceration extending into the cutis, being oval in shape, 4 by 2 inches in size, with highly raised edges. The surface of the ulcer, which was secreting freely, was uneven, having small holes where the ulceration was deeper than elsewhere. At the onset, the patient felt only a slight burning, but later pain was felt in the region of the hip. Six weeks after the appearance of the first ulcer, which healed under Alpine rays and antiseptic treatment, the skin nearby became pinkish red at a spot of about lentil size, and a pinhead sized superficial gangrenous ulcer appeared which grew steadily larger until at the end of a week it was the size of a dime, and after two weeks it was the size of a silver quarter. Since that time a third small ulcer appeared below the first one, which was filling in and showed healthy granulations. The patient suffered from increasing pains which deprived him of sleep. The lesions were located on the left side of the abdomen below the navel; and the patient said that he noticed a rumbling of the intestines of that region and a sensation of drawing together at those spots. Smears showed neither Ducrey, gonococci, nor any other germs except a few fusiform bacilli; cultures on all kinds of mediums revealed nothing. The man had returned from France too long ago to attribute the condition to sand-fly bites; it rather seemed to be a spontaneous progressive gangrene of the skin. The Wassermann reaction was negative.

DISCUSSION

DR. SATENSTEIN said that the lesions were common in Palestine, where he had been; and they were there attributed to the sand-fly bite. They started there just as this young man had described, and grew to be very large. The border was often more raised than in this instance and as a rule there were from five to seven or more lesions. The patient said that he had been in

service over there and in France. It was a very common condition in the Orient. The pathology was that of granuloma. The sand-fly is a very small insect, smaller than a mosquito, with milky white wings. The bite causes a small nodule which is very painful and itchy, and leaves a scar when it disappears. Dr. Satenstein said that he himself had some of these scars on his hands and legs but had been fortunate enough not to develop any ulcerations. In the army, they had hundreds of these cases and a great deal of bacteriologic work had been done; they found breaking-down granuloma—also a fusiform bacillus and a coccus.

Dr. Rosen said the case reminded him of one seen at the Vanderbilt Clinic. That patient was a colored man with a lesion on the penis who had been treated for syphilis for some time although repeated dark field examinations were negative and repeated Wassermann tests were negative. Treatment consisted of the administration of arsphenamin and mercury, but there was no improvement. The resemblance to this case was marked. There was a distinct raised border, resembling a basal celled epithelium. The lesion was excised, and the pathologic examination revealed a granuloma. Microscopic and cultural examination revealed the Ducrey bacillus. This bacillus was also found on aspiration. If the case were examined bacteriologically, the Ducrey bacillus might be found.

Dr. Kingsbury suggested that chancre be ruled out first. The patient had been in France and had had the lesion for eight weeks. In France, they had a chancroid which was unlike anything seen here and we knew nothing about it.

Dr. Satenstein said the Ducrey bacillus did not cause a granuloma.

Dr. Bechet said that he had recently abstracted an article from the *Annales des maladies vénériennes* on atypical chancroidal ulcerations. The descriptions of some of the cases seemed to fit Dr. Oulmann's patient. This case might come in that category.

Dr. Parounagian said that the ulcerations on the abdomen were entirely different from those seen in gonorrheal infections of the abdomen. They were simply broken down, undermined channels, some of them joined together, an ulcerative condition under the skin, not sharp, clean, round patches such as this patient presented.

Dr. Oulmann said that when he first saw the large lesion, it was much deeper, about an inch in depth. The lesion was healing now. He would have a biopsy made and report on it later. A later culture revealed Ducrey's bacillus.

ACNE OR PAPULONECROTIC TUBERCULID. Presented by Dr. Wise.

T. T., aged 28, who appeared at the Vanderbilt Clinic for the first time on the day of presentation, exhibited acne of the face, back, chest, and upper arms, and in addition had a rash on his thighs, buttocks, and forearms. Some of the physicians thought it was nothing but acne, but the presence of the lesions on the arms and other locations where acne does not appear suggested a papulonecrotic tuberculid with the acne. The question was whether the patient had, in addition to acne vulgaris, an acne cachecticorum. There were lesions which more resembled an acnitis. On the thighs he had violaceous and yellowish lesions which were not acne lesions. A Wassermann test had been made, but the result was not yet known.

DISCUSSION

Dr. Parounagian considered the condition a marked case of acne vulgaris.

Dr. Kingsbury agreed with Dr. Parounagian.

Dr. Wallhauser also was inclined to agree with the diagnosis of acne vulgaris. There seemed to be no connection between the scars and the lesions presented. The scars were present long before the eruption shown appeared.

Dr. Rosen agreed with the diagnosis as presented. He had never seen any case of acne vulgaris with lesions on the lower extremities. The patient also had distinct scarring in the scalp. It seemed to be a papulonecrotic tuberculid on the body with a possible acne varioliformis on the face and head.

Dr. Bechet expressed the opinion that the lesions on the forearm, particularly on the extensor surface, did not resemble acne. A few seemed to have necrotic centers, and those that were punched out were typically like those following resolving papulonecrotic tuberculids. There were lesions with necrotic centers at the hair margins. He was inclined to agree with the diagnosis presented.

SYPHILODERMATA AFTER INTENSIVE TREATMENT. Presented by Dr. Gilmour for Dr. Levin.

R. A., a carpenter, was first seen on Nov. 11, 1919, at which time he had had an ulcer on the penis for ten days. Examination revealed a typical chancre on the penis. Calomel had previously been applied to the lesion, and he had received one injection of mercury. Spirochetes were not found and the Wassermann reaction of the blood was negative. The patient had been married two months and his wife showed a florid secondary syphilitic eruption, with a ++++ Wassermann reaction.

The patient was sent to the Beth Israel Hospital Clinic, and between Nov. 25, 1919, and Jan. 10, 1920, he received eight intravenous injections of arsphenamin in doses of from 0.3 to 0.5 gm. He could not go to the clinic for the mercury injections. He returned to the clinic, February 4, saying that he had had influenza for three weeks and that the eruption had appeared ten days before his return. He presented an eruption consisting of lesions varying in size from that of a lentil to that of a nickel. They were firm, coppery, infiltrated, scaly lesions with wrinkles like cigaret paper on the summits of some. The eruption was most marked on the buttocks. The Wassermann reaction on the day previous to the presentation was +.

NEUROTIC EXCORIATIONS WITH LEUKODERMA-LIKE LESIONS. Presented by Dr. Parounagian.

A. A., aged 41, born in the United States, and single, a waiter, had a negative family history except that the maternal side was tuberculous. Two brothers and one sister were alive and well. He had had the usual diseases of childhood. For many years, he masturbated excessively, and attributed much of his trouble to that habit. He had typhoid fever at the age of 21, a mild attack with a relapse. He said that he had had a chancre fifteen years ago, but there was no scar and no evidence of syphilis. The Wassermann reaction, Jan. 14, 1920, was negative (Bellevue).

The patient stated that about three years ago he noticed "grub-worms" on his nose and face and neck, which he had to "dig out" with his fingers. He stated further that these excoriations would heal in a few days if left alone, but that he had to "dig out" the remaining "grub-worms."

He presented leukoderma-like lesions on the face, neck and buttocks, also recent lesions on the nose. One on the left side of the nose was produced the previous night. The patient stated that he worked all night to dig the worms from this area.

DISCUSSION

Dr. MacKee stated that a distinction should be made between dermatitis factitia and neurotic excoriations. In the former case, the patient produced the lesions and denied the act; in the latter case, the lesions were produced by scratching or picking in an endeavor to relieve imaginary symptoms or to remove imaginary insects; there was no intent to deceive. The case under discussion appeared to be one of neurotic excoriations.

Dr. Rulison (by invitation) said the lesions were caused by the finger nails. The man had never used any irritant or caustic.

Dr. Parounagian said he had not noted any keloidal lesions, but that if the patient were not carefful, an epithelioma would develop at the edge of the nostril. He had been warned not to touch the lesion but had come in again that day with places that he had dug out.

CHICAGO DERMATOLOGICAL SOCIETY

Regular Monthly Meeting, Feb. 18, 1920
Dr. David Lieberthal, *Presiding*

A CASE FOR DIAGNOSIS. Presented by Dr. Mitchell.

A man, aged 34, whose trouble had begun seven years before with cervical adenopathy and lesions on the legs, had had slight pain in the legs with a tendency to swell when he walked about. There had also been some itching. During the last few years three of the cervical glands had broken down. The Wassermann reaction in the beginning was negative, but the patient had been given one injection of arsphenamin, without benefit. Two years later, two more injections were given, which the patient asserted aggravated the trouble. Three recent Wassermann reactions had been negative. After remaining swollen for about four years, the cervical glands ruptured and discharged a whitish pus. The spleen was not enlarged. The veins in the right leg were slightly varicose.

The cutaneous lesions present consisted of numerous depressed scars on the arms and legs. There was a large mass on the right submaxillary region which was hard and fairly well defined. The lower two thirds of the legs had fairly well defined areas of brownish-red erythema interspersed with small papules and a few grouped lesions.

DISCUSSION

Dr. Quinn thought the lesions were tuberculids. The glandular involvement, with subsequent rupture, the scarring and the duration of the disorder made this diagnosis probable.

Dr. Oliver agreed with Dr. Quinn.

Dr. Foerster said the case reminded him of a patient presented before the Society by Fred Harris several years ago. Various diagnoses were suggested, and Dr. Harris eventually proved the condition to be the Sternberg type of tuberculosis. He believed this case belonged in the same group. The

fact that the disorder had been present for seven years assisted in ruling out the diagnosis of a real Hodgkin's, as that was too long a period for that disease.

Dr. Pusey agreed with Dr. Foerster that there were two conditions to be considered: first, the hypertrophy, which he believed was due to hypostatic congestion, as the circulation was very bad; second, the various lesions, with scarring, on the body, and the general adenopathy. A case of Hodgkin's disease does not usually last for seven years with the patient in the condition this man was in; and a history of breaking down of the tumors was not found in that disease. He thought it was a case of Sternberg's tuberculosis and folliclis.

Dr. Mitchell said the patient had been sent in from the U. S. Public Health Service hospital that day, and there had been no opportunity to study the case. He said he would try to get some sections and report on the condition later.

DERMATITIS HERPETIFORMIS. Presented by Dr. Pusey.

A man, aged 23, presented a disorder which had been present for four years, characterized by recurrent, grouped, itching, papular, vesicular, and urticarial lesions, on various parts of the body.

DISCUSSION

Dr. Beeson considered it a case of dermatitis herpetiformis.

Dr. Quinn agreed with this diagnosis.

Dr. Stillians thought it was a dermatitis herpetiformis and was interested in the patient's statement that just before the eruption come on, he became very nervous; and then the itching began.

A CASE FOR DIAGNOSIS. Presented by Dr. Mitchell.

A man, aged 26, presented a lesion which had been present on the right scapula for two months. It began as a red, scaling patch wnich had been indurated for about a month. There was slight pain at times, but apparently no other sensation, and no other lesions were present. There had been no cough at any time except a little following an attack of influenza, from which he had recently recovered. There was no history of pulmonary trouble of any kind, and the general health was good.

The lesion was situated on the right scapula and measured about 5 cm. in diameter. It was a sharply defined, circular mass and deeply indurated. The entire indurated area was covered by fine, dilated vessels which stopped sharply at the margin of the induration. In the center of the lesion was a depression, 1 cm. in diameter. At the upper border was a hemispherical, rather yellowish, hard nodule. No cutaneous lesions were present.

DISCUSSION

Dr. Beeson thought the case was very interesting, and that the lesion was a new growth, possibly a sarcoma.

Dr. Pusey said there was some central scarring like that of syphilis, and that he would want to exclude the diagnosis of a gumma that had undergone involution. He suspected that it was a gumma, reserving the right to make a diagnosis later. If syphilis was not found, a microscopic examination would be necessary to settle the diagnosis.

DR. STILLIANS suggested the diagnosis of sarcoid.

DR. MITCHELL stated that the man was seen just before the meeting and that there had been no time for much investigation. The patient was to return for laboratory work. He was impressed with the case at first as being a sarcoid because of the telangiectasia and the central necrosis, which he thought would fit in with the sarcoid of the Darier-Roussy type. There was no history of syphilis, but a Wassermann test would be made and the case would be reported later. Subsequently the Bordet-Wassermann reaction proved to be negative, and two injections of arsphenamin were given without effect on the lesion. Biopsy showed the lesion to be a sarcoma, and radiotherapy was instituted.

SYCOSIS VULGARIS. Presented by DR. STILLIANS.

A Russian Jew presented an eruption which had been present on the face for thirteen years and which had begun near the ears. The whole right cheek was infiltrated, brownish-red, with follicular pustules here and there: above the ear these lesions joined a similar infiltration, involving about half the right occipital region. On the left cheek was a patch about 2½ by 1½ inches. Since August, 1919, the groins and suprapubic region had been involved in a similar eruption, and in January, 1920, an eruption appeared on both wrists.

DISCUSSION

DR. BAER considered it a sycosis vulgaris and asked what treatment had been used.

DR. STILLIANS said he had used vaccines and radiotherapy. There had been some improvement from the latter.

EXFOLIATIVE DERMATITIS. Presented by DR. STILLIANS.

A farmer, aged 66, who had always been well, in the summer of 1919 had had his upper teeth extracted and while he was without teeth had become constipated. The dermatitis which first appeared in September, 1919, was first noticed on the hands, and then over the entire body. Marked itching was complained of. The patient had lost considerable hair, and the scaling at times had been abundant. Almost the entire skin was thickened and red, with the scales especially abundant on the scalp, palms and soles. He had had two periods of arsenical treatment, with increase of symptoms both times. He improved somewhat on quinin, but a dosage of 18 grains daily caused deafness. Alkalies had some beneficial effect. He had had a persistent eosinophilia of from 25 to 30 per cent.

DISCUSSION

DR. PUSEY thought the case was of the Wilson type, which was an acute affair. He thought there was a group that had to do with the lymphatic glandular apparatus and another that was due to intoxication.

DR. MITCHELL said the recent work of Douglas Symmers was interesting in this connection; he grouped the exfoliative dermatoses and pseudoleukemias all in one group as being due to changes in the blood-forming organs. Symmers' idea was that they were intoxications acting on the blood-forming organs, with the cutaneous manifestations as a symptom. The idiopathic exfoliative dermatitis known as pityriasis rubra of Hebra was readily differentiated from the secondary type or the Wilson-Brocq type, because in the

former the skin was lacking in edema, was uniformly dark red, the scales were very fine and there was eventually atrophy and almost invariably death, whereas in the Wilson-Brocq type there was marked edema, the scales were, as a rule, quite large, and there was a lack of uniformity in the lesions. Recovery frequently took place.

DR. STILLIANS said that no treatment except quinin has accomplished anything, and that did not do enough because the patient could not take large doses. He had studied the case in the hospital, but had found nothing definite. He asked for suggestions as to treatment.

DR. MITCHELL thought it would be worth while to try the detoxicated thyroid as Engman has used it in such cases.

ARSPHENAMIN ERUPTION. Presented by DR. ZEISLER.

A man, aged 26, had developed an eruption on the arms and neck about one week before presentation. He had received four injections of 0.9 neoarsphenamin and the eruption had appeared after the last injection. He had been given four mercurial injections four months ago, but none recently. The eruption consisted of a follicular papular eruption, mostly on the trunk, upper extremities and face.

DISCUSSION

DR. FOERSTER thought it was a case of arsphenamin intoxication with an exfoliative dermatitis, and that it would be interesting to know which brand and the amount of arsphenamin that had been used.

DR. PUSEY agreed with Dr. Foerster.

DR. STILLIANS was interested in such cases for they had had several patients at the County Hospital that had had eruptions before the final injection was given. He believed that the skin should be watched carefully during arsphenamin therapy. They had one man who did not have syphilis, but who had dermatitis venenata from iodin. Someone made a diagnosis of syphilis, and he was given an injection of arsphenamin and developed an exfoliative dermatitis from the first dose.

DR. ZEISLER stated that the patient had a chancre when he was first seen at the clinic and had no eruption. He was given four injections of 0.9 neoarsphenamin of the Metz variety and the eruption appeared following the last injection one week before. He thought it was an unusual type of arsphenamin eruption.

SYPHILITIC KERATODERMA. Presented by DR. ZEISLER.

A man, aged 50, had had an eruption on the left foot of six months' duration, which caused some difficulty in walking. There were no lesions on any other part of the body. The eruption consisted of sharply marginated, hyperkeratotic lesions on the sole of one foot, which spread over to the dorsum, with a tendency to ulceration at the margin. He had had a primary lesion twenty-five years ago and no symptoms since then. The Wassermann reaction was ++++.

DISCUSSION

DR. QUINN thought it was a case of late syphilis.

DR. FOERSTER thought the superficial scar formation and the infiltration of the border all pointed toward syphilis.

DR. STILLIANS agreed with this diagnosis and was interested in the very peculiar dark brown macule farther up on the leg which was very similar to that in a case shown by him at the December meeting as Schamberg's disease.

DR. PUSEY and DR. MITCHELL thought it was a syphilid.

MACULAR ATROPHY FOLLOWING SYPHILIS. Presented by DR. ZEISLER.

A man, aged 30 years, with a history of chancre and eruption three years ago, and who had had several courses of treatment, a month ago presented himself with mucous patches on the tongue, adenopathy and ++++ Wassermann reaction. Scattered over the body were white, atrophic, scarlike spots which were apparently elevated above the surface of the skin with a pseudohypertrophy, but on stretching the skin there was seen to be an atrophy. The man stated that these lesions had persisted since the generalized eruption three years previously.

DISCUSSION

DR. STILLIANS was interested because of the fact that the lesions were papular when not stretched, probably because of the fact that the skin pressed the areas together. He could not make out that they were the direct result of a syphilitic infection, and thought it was a macular atrophy independent of the syphilis.

DR. LIEBERTHAL was impressed with the case as being the result of syphilis, and was reminded of one observed by him about ten years ago in which syphilitic papules gradually subsided, leaving atrophic spots in which the skin became heaped up, as in this case.

DR. PUSEY thought that first the man had syphilis; he had had a large papular syphilid and with the disappearance of the subcutaneous, small gummas, there was destruction of a large part of the substance of the corium, and as a result of that, thin patches of the skin ballooned as they do in multiple tumor-like newgrowths. The bulging occurred because the tension of the skin was not sufficient to hold the tissues down to the normal contour. One very frequently saw syphilids without any ulceration, and these had doubtless been present to a large extent in this case and the tumor-like newgrowths were the result.

DR. MITCHELL was inclined to agree with Dr. Lieberthal, and stated that he saw a similar case in a negro at Camp Funston.

DR. EISENSTAEDT was inclined to believe that Dr. Pusey's suggestion was correct. The disorder was rather peculiar in distribution and there was great variation in the size of the lesions. Many of them had evidently been round, subcutaneous gummas involving also the corium, and others seemed to be rather linear. This could occur if the patient had rapidly taken on weight following the appearance of the syphilitic lesions. He was not opposed to the view expressed by Dr. Lieberthal.

DR. BEESON was reminded of a picture he saw in Darier's Précis de Dermatologic under the title of "Vergetures Rondes." They were atrophic lesions in the skin which might follow any one of a number of eruptions, but especially syphilis.

DR. ZEISLER agreed with Dr. Lieberthal and Dr. Pusey in considering the case one of atrophy following a secondary syphilid.

Book Reviews

A TEXTBOOK OF DERMATOLOGY. By J. DARIER, Physician to the Hôpital Saint Louis; Member of the Academy of Medicine, Paris, France; Honorary Member of the American Dermatological Association. Authorized translation from the second French edition. Edited with notes by S. Pollitzer, New York, Ex-President of the American Dermatological Association; corresponding member of the French Society of Dermatology and Syphilology. Pp. 769, illustrated with 204 engravings and four colored plates. Lea & Febiger, Philadelphia and New York, 1920.

This excellent book, which heretofore in the second edition was available only to those with a knowledge of French, and in the Jadassohn edition of 1913 only to those with an acquaintance with German, is welcomed by English reading students of dermatology. That it is edited by Dr. Pollitzer, whose experience with American dermatology parallels that of the French author in time and extent, adds to its value.

The arrangement of the text of this edition follows that of the original. There are two divisions and an appendix. The first section is entitled, "Morphology of the Dermatoses," and in it are described the eruptive lesions, and noneruptive cutaneous changes together with the principal syndromes. The term "eruptive dermatoses" is applied to skin diseases made up of efflorescences, such as spots, papules and vesicles. The "noneruptive dermatoses" consist of those showing change of color, hypertrophy, atrophy or lesions of the nails, hair, etc. The second section is headed, "Nosology of the Dermatoses." Here, the pathologic entities are reviewed and classified according to the nature of their cause. Tumors of the skin are classed together although their etiology is unknown.

Darier adheres to the term eczema, applying it to the eruptions not characterized by a single eruptive element, but by a series of elementary lesions which succeed one another, combine or coexist in neighboring localities. These lesions are the result of an inflammatory process, affecting the epidermis and cutis; an epidermodermatitis, comprising several stages which are equally important. He gives these characteristic features: arrangement in spots, patches, or surfaces with irregular outlines (insular, geographic or archipelagous); development in crops or relays, with a tendency to peripheral extension, and often to a chronic state with fresh exacerbations and of more or less pruritic character. Darier conceives of eczema as a relatively common mode of reaction of the skin toward a series of mechanical, physical, parasitical and microbic irritants. He proposes the term eczematoses for the chronic pathologic conditions described by other authors as constitutional eczema, eczema-disease or true eczema. When a dermo-epidermatitis of eczematous type becomes superadded to the lesions of a preexisting dermatosis, Darier speaks of secondary eczematization, or of an eczematized dermatosis. The dry eczemas, eczema seborrheicum, or seborrheids are called eczematides, and a special chapter is devoted to them.

Darier admits the existence of autotoxic eruptions, and although he feels that it is unpractical to draw a picture of the cutaneous manifestations of gout, uremia, or urinary insufficiency, hepatic insufficiency, cholemia, the gastro-intestinal dyspepsias, etc., he asserts that eczematosis of adult or aged people may not infrequently lead to the discovery of a still latent internal cancer, an existing pyelonephritis, or nephritis, etc.

The eruptions of syphilis are discussed in their morphologic divisions of the first section. A chapter under the nosology treats of the cause, transmission, treatment, etc., but the symptoms other than those of the skin and mucous membranes receive slight mention. The editor has added his notes and his personal views on the treatment of syphilis according to the intensive administration of arsphenamin. Mycosis fungoides is discussed in a chapter with cutaneous leukemias and allied diseases.

The histologic descriptions are comprehensive, and not overlong. The cuts illustrative of the pathology are suggestive only. The photographs are those that appeared in the original, and it should be a source of gratification that some appear from the publications of American dermatologists.

The therapeutic section is based on French usage. Dr. Pollitzer has made frequent notes in this part.

The index is short, unfortunately, for a textbook. There are many omissions. Arsphenamin, arsenic therapy and chemotherapy are not discussed.

The book may be said to be the product of three schools of dermatology: the French by Darier, the German by Jadassohn of Bern (a considerable number of whose notes to a German edition of 1913 have been incorporated in the second French edition), and the American by Pollitzer of New York.

COMMON DISEASES OF THE SKIN WITH NOTES ON DIAGNOSIS AND TREATMENT. By G. Gordon Campbell. New York: The Macmillan Company, 1920.

This is not an elementary work on skin diseases, but is rather a series of brief comments on certain of the commoner dermatoses. The book is profusely illustrated with good photographs. The text is surprisingly brief and is really inadequate, the briefest descriptions of the clinical pictures with equally brief comments on the treatment of the diseases considered, being given. The book contains nothing on etiology, pathology or bacteriology. Impetigo, for example, is described as an infectious disease; the text does not explain what the infectious agent is. The diseases are taken up in alphabetical order: carcinoma follows alopecia areata; keloid follows impetigo; urticaria follows tuberculosis, and so on.

It is difficult to justify the existence of books that contain nothing on etiology, bacteriology or pathology and so give no reasons for the phenomena of the diseases or explanations of the treatment.

Index to Current Literature

DERMATOLOGY

Branchial Fistula, Cutaneous Manifestations in. A. Eddowes, Brit. M. J. **1**: 326 (March 6) 1920.

Canities, Sudden, Cases of, in History. C. G. Cumston, Med. Rec. **97**:609 (April 10) 1920.

Carbuncle with General Staphylococcus Infection. R. Darget, J. de méd. de Bordeaux **91**:152 (March 25) 1920.

Dermatology, Certain Drugs Used in. F. Terra, Brazil-med. **34**:49 (Jan. 24) 1920.

Dermatology Course, Inaugural Lecture of. A. Ducrey, Policlinico **27**:127 (Feb. 2) 1920.

Dermatomyositis, Acute. Ridder, Berl. klin. Wchnschr. **56**:1211 (Dec. 22) 1919.

Drugs, Certain, Used in Dermatology. F. Terra, Brazil-med. **34**:49 (Jan. 24) 1920.

Ectoderm Defect, Congenital. Report of Case. W. H. Goeckermann, Arch. Dermatol. & Syphilol. **38**:396 (April) 1920.

Erythema Multiforme Mistaken for Lesions Due to Chemical Poisoning. G. G. Campbell, Canad. M. A. J. **10**:368 (April) 1920.

Fulguration for Chancroid of the Face. G. Paoletti, Riforma med. **35**:1103 (Dec. 13) 1919.

Herpes Zoster, Neuralgia Persisting After. J. A. Sicard, Médecine **1**:278 (Feb.) 1920.

Hyperhidrosis, Right, Partial Resection of Cervical Sympathetic for. A. Kotzareff, Rev. méd. de la Suisse Rom. **40**:111 (Feb.) 1920.

Hyphomycetoma. P. S. de. Magalhães, Bull. de l'Acad de méd., Paris **83**: 137 (Feb. 17) 1920.

Infections, Focal, Relation of, to Skin Diseases. C. H. Ball, Oklahoma State M. A. J. **13**:49 (Feb.) 1920.

Leprosy in Pernambuco. A. Rocha, Brazil-med. **34**:52 (Jan. 24) 1920.

Lupus Erythematosus, Treatment of. Axmann, Deutsch. med. Wchnschr. **45**: 1419 (Dec. 18) 1919.

Lupus, Treatment of. L. Freund, Deutsch. med. Wchnschr. **45**:1386 (Dec. 11) 1919.

Lupus, Treatment of. P. J. Mink, Nederlandsch. Tijdschr. v. Geneesk. **1**:130 (Jan. 10) 1920.

Pityriasis Rosea and Trichophytosis. Fried, München. med. Wchnschr. **66**: 1423 (Dec. 5) 1919.

Poisoning, Chemical, Erythema Multiforme Mistaken for Lesions Due to. G. G. Campbell, Canad. M. A. J. **10**:368 (April) 1920.

Purpura Hemorrhagica, Case of. J. J. Levin, Med. J. South Africa **15**:135 (Jan.) 1920.

Purpura in Young Infant. T. Reh, Arch. de méd. d. enf. **23**:179 (March) 1920.

Radium, Use of, in the Treatment of Epithelioma. C. Swanson, Georgia M. A. J. **9**:75 (March) 1920.

Rhinophyma. M. G. Seelig, Surg., Gynec. & Obstet. **30**:394 (April) 1920.

Scleroderma, Congenital, and Sclerodactylia, Necropsy Findings in Case of. F. D. Weidman, Arch. Dermatol. & Syphilol. **38**:375 (April) 1920.

Skin Diseases, Relation of Focal Infections to. C. H. Ball, Oklahoma State M. A. J. **13**:49 (Feb.) 1920.

Skin Grafting by Means of Freezing with Ethyl Chlorid. G. Torrance, Surg., Gynec. & Obstet. **30**:405 (April) 1920.

Skin Manifestations in Branchial Fistula. A. Eddowes, Brit. M. J. **1**:326 (March 6) 1920.
Skin, Microscopic Studies of. H. Schur, Wien. klin. Wchnschr. **32**:1201 (Dec. 11) 1919.
Sporotrichosis. E. S. Lain, Oklahoma State M. A. J. **13**:41 (Feb.) 1920.
Trichophyton Infection, Treatment of. O. Sachs, Wien. klin. Wchnsch. **32**: 1229 (Dec. 18) 1919.
Trichophytosis and Pityriasis Rosea. Fried, München. med. Wchnschr. **66**: 1423 (Dec. 5) 1919.
Trophedema in the Insane. E. Coulonjou and Others, Paris méd. **10**:230 (March 13) 1920.
Tuberculin Reaction, Skin, in Children. Germaine Mioche, Nourrisson **8**:42 (Jan.) 1920.

SYPHILOLOGY

Aortitis, Syphilitic. G. Hubert, Deutsch. Arch. f. klin. Med. **128**:317 (Feb. 18) 1920.
Arsphenamin Exanthems, Recurrent Localized. W. Schönfeld, Deutsch. med. Wchnschr. **46**:11 (Jan. 1) 1920.
Arsphenamin in General Paresis. Laignel-Lavastine, Médecine **1**:309 (Feb.) 1920.
Arsphenamin Preparations, Fifty-Eight Cases of Delayed Arsenical Poisoning Following Administration of. G. S. Strathy; C. H. V. Smith and B. Hannah, Canad. M. A. J. **10**:336 (April) 1920.
Chancre, Polypoid Syphilitic, of the Tonsil. G. Portmann, Paris méd. **10**:174 (Feb. 28) 1920.
Colloidal Gold and Other Cerebrospinal Fluid Reactions. C. E. Nixon, Minnesota Med. **3**:186 (April 20) 1920.
Colloidal Gold Reactions. M. Warwick, Minnesota Med. **3**:188 (April 20) 1920.
Dystrophies and Inherited Syphilis. V. Hutinel and H. Stévenin, Arch. de méd. d. enf. **23**:145 (March) 1920.
Epilepsy and Syphilis. L. Babonneix, Médecine **1**:286 (Feb.) 1920.
Exanthems, Recurrent Localized Salvarsan. W. Schönfeld, Deutsch. med. Wchnschr. **46**:11 (Jan. 1) 1920.
Gonococcus Processes, Syphilis Complicating. C. A. Castaño, Semana méd. **26**:704 (Dec. 4) 1919.
Kidney, Ureter and Suprarenal, Syphilis of. U. J. Wile, Arch. Dermatol. & Syphilol. **38**:413 (April) 1920.
Leishmaniasis and Inherited Syphilis, Luargol in Treatment of. Rezende Puech, Ann. Paulistas de Med. e Cir. **10**:268 (Dec.) 1919.
Luargol in Treatment of Inherited Syphilis and Leishmaniasis. Rezende Puech, Ann. Paulistas de Med. e Cir. **10**:268 (Dec.) 1919.
Lung Enlargement in Syphilis. A. Edelmann, Wien. klin. Wchnschr. **32**:1182 (Dec. 4) 1919.
Lung, Syphilis of. G. Schröder, München. med. Wchnschr. **66**:1401 (Dec. 5) 1919.
Neurosyphilis, Intraspinal Treatment of. G. Marinesco, Rev. neurol. **26**:901 (Dec.) 1919.
Neurosyphilis, Treatment of. A. Brioso Vasconcelos, Gaz. méd. de Mexico **1**:15 (Jan.) 1920.
Paralysis, Syphilitic Facial, Case of. A. Ragusin, Semana méd. **26**:718 (Dec. 4) 1919.
Paresis, General, Arsphenamin in. Laignel-Lavastine, Médecine **1**:309 (Feb.) 1920.
Paresis, War in Relation to. E. Herzig, Wien. klin. Wchnschr. **32**:1207 (Dec. 11) 1919.
Poisoning, Arsenical, Delayed, Fifty-Eight Cases of, Following the Administration of Arsphenamin Preparations. G. S. Strathy; C. H. V. Smith and B. Hannah, Canad. M. A. J. **10**:336 (April) 1920.

Reactions, Colloidal Gold. M. Warwick, Minnesota Med. **3**:188 (April 20) 1920.
Reactions, Other Cerebrospinal Fluid, Colloidal Gold Reactions. C. E. Nixon, Minnesota Med. **3**:186 (April 20) 1920.
Reactions, Precipitation, in Syphilis. E. Meinicke, Deutsch. med. Wchnschr. **46**:13 (Jan.1) 1920.
Reaction, Sachs-Georgi, Value of. L. Hauck, München. med. Wchnschr. **66**: 1413 (Dec. 5) 1919.
Sachs-Georgi Reaction, Value of. L. Hauck, München. med. Wchnschr. **66**: 1413 (Dec. 5) 1919.
Salvarsan, Silver, in the Treatment of Syphilis. Fabry, Deutsch. med. Wchnschr. **45**:1358 (Dec. 4) 1919.
Salvarsan, Silver Sodium. O. Nägeli, Schweiz. med. Wchnschr. **50**:161 (Feb. 26) 1920.
Spine, Syphilitic Spondylitis: Negative Wassermann Reaction. S. C. Evans and C. F. Marshall, Lancet **1**:656 (March 20) 1920.
Spondylitis, Syphilitic: Negative Wassermann Reaction. S. C. Evans and C. F. Marshall, Lancet **1**:656 (March 20) 1920.
Suprarenal, Ureter and Kidney, Syphilis of. U. J. Wile, Arch. Dermatol. & Syphilol. **38**:413 (April) 1920.
Syphilis, Abortive Treatment of, and Tuberculosis. Tieche, Schweiz. med. Wchnschr. **50**:149 (Feb. 19) 1920.
Syphilis and Epilepsy. L. Babonneix, Médecine **1**:286 (Feb.) 1920.
Syphilis at a Venereal Clinic. E. F. Skinner, Lancet **1**:650 (March 20) 1920.
Syphilis Causing Facial Paralysis, Case of. M. Ragusin, Semana méd. **26**:718 (Dec. 4) 1919.
Syphilis Complicating Gonococcus Processes. C. A. Castano, Semana méd. **26**:704 (Dec. 4) 1919.
Syphilis, Experimental, in Rabbit. I. Primary Infection in Testicle. W. H. Brown and Louise Pearce, J. Exper. M. **31**:475 (April 1) 1920.
Syphilis, Hereditary, War in Relation to. K. Hochsinger, Wien. klin. Wchnschr. **32**:1173 (Dec. 4) 1919.
Syphilis, Inherited, and Dystrophies. V. Hutinel and H. Stévenin, Arch. de méd. d. enf. **23**:145 (March) 1920.
Syphilis, Inherited, and Leishmaniasis, Luargol in Treatment of. Rezende Puech, Ann. Paulistas de Med. e Cir. **10**:268 (Dec.) 1919.
Syphilis, Lung Enlargement in. A. Edelmann, Wien. klin. Wchnschr. **32**: 1182 (Dec. 4) 1919.
Syphilis, Mon-Arsone in Treatment of. B. L. Wright, L. A. Kennell and L. M. Hussey, Med. Rec. **97**:607 (April 10) 1920.
Syphilis of Kidney, Ureter and Suprarenal. U. J. Wile, Arch. Dermatol. & Syphilol. **38**:413 (April) 1920.
Syphilis of Spine: Negative Wassermann Reaction. S. C. Evans and C. F. Marshall, Lancet **1**:656 (March 20) 1920.
Syphilis of the Aorta. G. Hubert, Deutsch. Arch. f. klin. Med. **128**:317 (Feb. 18) 1919.
Syphilis, Precipitation Reactions in. E. Meinicke, Deutsch. med. Wchnschr. **46**:13 (Jan. 1) 1920.
Syphilis, Pulmonary. G. Schröder, München. med. Wchnschr. **66**:1401 (Dec. 5) 1919.
Syphilis, Silver Salvarsan in the Treatment of. Fabry, Deutsch. med. Wchnschr. **45**:1358 (Dec. 4) 1919.
Syphilography Course, Inaugural Lecture of Stanzaile, Riforma med. **36**:170 (Feb. 14) 1920.
Tabes Dorsalis, Differential Diagnosis Between Pains of, and Those of Focal Infection. A. M. Crance, Med. Rec. **97**:606 (April 10) 1920.
Testicle, Primary Infection in, Experimental Syphilis in Rabbit. W. H. Brown and Louise Pearce, J. Exper. M. **31**:475 (April 1) 1920.
Tonsil, Polypoid Syphilitic Chancre of the. G. Portmann, Paris méd. **10**:174 (Feb. 28) 1920.

INDEX TO VOLUME 1

The star (*) preceding the page number indicates an original article in The Archives. Book Reviews, Obituaries and Society Transactions are indexed under these headings in their alphabetical order under the letters B, O and S respectively.

Abramowitz, W. W.: Annular lichen planus 329
Case for diagnosis 110
Delaying early diagnosis of syphilis (chancre); dangers and how to avoid them 212
Ichthysosis vulgaris and von Recklinghausen's disease 345
Nevus lateralis, hyperkeratotic type 344
Nevus verrucosus 111
Psoriasis and dermatitis exfoliativa 713
Abscesses, multiple; H. Fox 716
Acanthosis nigricans or melanotic cancerous papillomata; Dubreuilh 66
Acne; E. P. Zeisler 483
or papulonecrotic tuberculid; Wise 741
Acnitis; Strickler 102
Acro-asphyxia; F. Wise 340
Acrodermatitis chronica atrophicans; F. Wise 115
chronica atrophicans with report of case; M. Scholtz *565
Acromegaly; J. M. Armstrong 360
unilateral; J. F. Schamberg 104
Actinomycosis, cancer of face resembling; J. Nicolas, M. Favre and Massia. 452
Acton, H. W.: Study of distribution of Bagdad boils on body made with view to discover transmitting agent 65
Adamson, H. G.; Multiple xanthoma in boy 695
Lichen planus in children 582
Present position of curative vaccination 211
Schamberg's "peculiar progressive pigmentary disease of skin" 326
Addison's disease; Strickler 101
Adenoma sebaceum; I. Rosen and Wolf, 329; W. B. Trimble, 340; J. J. Rothwell 700
Adson, A. W.; Surgical treatment of gummatous osteitis of skull 584
Aikins W. H. B.; Status of radium-therapy in dermatology 581
Alling; Case for diagnosis 110
Alopecia, epidemic of; W. J. Rutherford 580
postinfluenzal; H. H. Hazen 68
totalis; M. B. Parounagian 220
totalis (treated with carbolic acid); B. F. Ochs 459
Angioma serpiginosum; A. M. H. Gray, 64; H. Fox 461
Anthrax, cutaneous; E. F. Neve 449
human; J. C. Regan and C. Regan 72
shaving-brush anthrax of face; G. Pernet 695
Aortic insufficiency and Wassermann test; J. E. Benjamin and J. S. Havre. 325
insufficiency, syphilitic; J. C. Meakins 698

PAGE

Apothesin, skin reactions to apothesin and quinin in susceptible persons; W. H. Mook 651
Armstrong, J. M.; Acromegaly 360
Leprosy 360
Pigmented mole 360
Arsenic, erythema due to arsenic; M. G. Milian 578
intramuscular arsenical treatment; L. Gerbay 452
pigmentation due to arsenic; Parounagian 739
preliminary report on syphilitic and arsenical jaundice; G. O. Scott 208
Arsenobenzene, Arsenobenzol: See Arsphenamin.
Arsphenamin, avoidance of untoward results following arsphenamin administration; C. Stern 206
comparison of two methods of administering arseno-benzol compounds in syphilis; H. E. Gibson 453
early nervous syphilis after arsenobenzene; J. E. R. McDonagh 687
eruption; E. P. Zeisler 746
exfoliative dermatitis due to arsphenamin; report of fatal case; J. R. Latham 69
four fatalities following salvarsan; W. B. Blanton 212
functions of cerebrospinal fluid, with special considerations of spinal drainage and of intraspinal injections of arsphenamized serum; F. X. Dercum 579
hemolytic activity of solutions of arsphenamin and neo-arsphenamin; J. A. Kolmer and E. M. Yeagle 690
laboratory and clinical studies bearing on causes of reactions following intravenous injections of arsphenamin and neo-arsphenamin, second communication; J. F. Schamberg, J. A. Kolmer, G. W. Raiziss and C. Weiss *235
persistent salvarsan exanthema; D. Fuchs 698
serious reactions from salvarsan and diarsenol brands of arsphenamin; unusual blood pictures, with report of fatal case; J. E. Moore and F. E. B. Foley *25
therapeutic management of tuberculids with specific reference to efficiency of arsphenamin; J. H. Stokes 72
treatment of syphilis with silver-salvarsan; Rile and Fruhwald 583
treatment of tuberculids; J. H. Stokes 573
Arthritis, case of gonorrhea with arthritis and keratoses; N. P. Lang 77
Ashbrooke, C.: One aspect of syphilis as community problem 74
Atrophoderma, pigmentation with atrophoderma on right thigh; G. M. MacKee 348
Atrophy, acrodermatitis chronica atrophicans with report of case; M. Scholtz *565
macular atrophy of skin; Stillians 484
of skin; A. W. Stillians 595
Atwater, R. M.: Scleroderma and sclerodactylia; report of case with roentgen rays and review of literature 73
Axillae, chronic papular itching eruption of axillae and pubes (Fordyce); S. M. Withers *8

Babonneix; Allergy in syphilis of nervous system 67
Bachman, R. W.: Spore identifications in scrapings *50
Bacot, A.: Experiments on destruction of lice and nits 450

PAGE

Baeslack, F. W.: Diagnosis of primary syphilis by culture..... 582
Bagdad boils, study of distribution of, on body made with view to discover transmitting agent; H. W. Acton..... 65
Bagg, H. J.: Pathological changes accompanying injections of an active deposit of radium emanation..... 580
Baker, H. M.: Incidence of protein sensitization in normal child..... 453
Barber, H.; Cerebrospinal fluid in syphilis..... 212
Lupus erythematosus associated with streptococcal infection of tonsils.... 327
Wassermann test; criticism of its reliability..... 78
Barendt, F. H.: Scleroderma..... 697
Barker, L. F.: Chronic pemphigus vegetans of several years' duration..... 76
Baudouin, E.: Motor troubles in zona..... 323
Bechet, P. E.; Case for diagnosis..... 356
Extensive erythematosus showing result of repeated applications of 95 per cent. phenol solution..... 351
Hydrargism from application of weak ammoniated mercury ointment in treatment of psoriasis.....*636
Mycosis fungoides..... 711
Pityriasis rubra pilaris.....111; 705
Tuberculosis verrucosa cutis.....330; 705
Bedell, A. J.: Multiple vaccination of eyelids..... 584
Benjamin, J. E.: Relation of aortic insufficiency to Wassermann test..... 325
Bercovitz, N.: Cancer in Hainan, China..... 71
Bladder, syphilis of; L. Thompson..... 694
Blanton, W. B.: Four fatalities following salvarsan..... 212
Blastomyces, clearing house for cutaneous fungi and blastomyces; F. D. Weidman 683
Blastomycosis; A. W. Stillians, 94; D. Lieberthal, 477; B. F. Ochs, 734; A. W. Stillians and F. E. Senear..... 589
carcinoma suggesting blastomycosis; Mitchell and Finnerud..... 589
extensive, of arm; J. Butler, Jr..... 359
Blood, chemical composition of, in cancer; R. C. Theis and W. S. Stone.. 324
Boggs, R. W.: Treatment of epithelioma by radium..:..... 73
Boil, Bagdad, study of distribution of Bagdad boils on body made with view to discover transmitting agent; H. W. Acton..... 65
Delhi boil; H. MacCormac..... 65
Bonne, E.: "Bosch-yaws," dermal leishmaniasis of Dutch Guiana..... 320
Bonorino Udaondo, C.: Atrophic cirrhosis of liver with inherited syphilis.. 568
Book Reviews:
Common Diseases of Skin with Notes on Diagnosis and Treatment; G. Gordon Campbell..... 749
Diseases of Skin; R. L. Sutton..... 117
Le Traitement de la Syphilis par les Composes Arsenicaux; Lacapère... 230
Textbook of Dermatology; J. Darier..... 748
Bory, L.: Parasitic theory of psoriasis..... 587
Bosch-yaws, the dermal leishmaniasis of Dutch Guiana; E. Bonne..... 320
Bowen, J. T.: Precancerous dermatoses; further course of two cases previously reported *23
Branchial cyst; F. L. McEwen..... 598
Bridgeman, F. W.; Heart block caused by gumma of septum..... 68
Brocq, L.: New notes on eczemas..... 66
Broders, A. C.: Squamous-cell epithelioma of lip..... 685

PAGE

Bromid, circular ulcer of leg caused by administration of bromids; E. Ward 214
eruption; F. Wise..... 709
Brown, W. H.: Vitiligo and its relation to syphilis, acquired or hereditary.. 213
Browning, C. H.: Complement fixation test in syphilis..... 206
Wassermann tests; occurrence of variations in results of successive tests. 79
Bubo, filiform drainage in treatment of chancroidal bubos; A. Floquet... 325
Bullard, H. H.: Method of clearing frozen section..... 68
Bunch, J. L.: Keratosis follicularis..... 65
Linear morphea..... 695
Burn, extensive keloidal scarring after burn; F. Wise and J. A. Fordyce.. 730
Burnier: Gonococcal chancres..... 67
Burrows, M. T.: Significance of lunula of nail..... 68
Butler, J., Jr.: Extensive blastomycosis of arm..... 359

Cailliau: Wrinkled senile skin in child of two..... 455
Calcareous deposits in skin; Fernet and Nahan..... 586
Camphor oil tumors; W. H. Mook and W. G. Wander.....*304
Cancer, chemical composition of blood in cancer; R. C. Theis and W. S. Stone 324
early diagnosis of cancer of tongue; M. Ferrand..... 207
effect of X-ray irradiation on living carcinoma and sarcoma cells in tissue cultures in vitro; N. Kimura..... 71
in Hainan, China, preliminary statistical study of 131 operations with special reference to age incidence, anatomical distribution and etiology; N. Bercovitz..... 71
in syphilitic patient; B. Lapowski..... 330
mortality statistics of cancer among wage earners; with observations on comparative incidence of disease in general population; L. Dublin. 72
of face resembling actinomycosis; J. Nicolas, M. Fevre and Massia..... 452
old age in relation to cell-overgrowth and cancer; E. W. Goodpasture and G. B. Wislocki..... 67
precancerous dermatoses; further course of two cases previously reported; J. T. Bowen..... *23
precancerous lesions of skin of vulva; leukoplakic vulvitis, kraurosis, pruritus; F. J. Taussig.....*621
solar keratoses and cutaneous cancer; J. N. McCoy.....*175
studies on X-ray effects; direct action of X-rays on transplantable cancers of mice; E. Hill, J. J. Morton and W. D. Witherbee..... 76
suggesting blastomycosis; Mitchell and Finnerud..... 589
Carcinoma: See Cancer
Carrera, J. L.: Pathologic study of lungs in 152 necropsy cases of syphilis.. 451
Carretti, H. L.: Tertiary syphilis of liver..... 697
Carter, D. W., Jr.: Chronic pemphigus vegetans of several years' duration.. 76
Carulla, J. E.: Atrophic cirrhosis of liver with inherited syphilis..... 586
Castellani, A.: Cultural characters of tricophyton balcaneum cast., the cause of pseudopityriasis capitis..... 321
Cerebrospinal fluid, functions of, with special considerations of spinal drainage and of intraspinal injections of arsphenamized serum; F. X. Dercum..... 579
in syphilis; C. F. White and H. Barber..... 212
nonconcomitance of spinal fluid tests; H. C. Solomon..... 323

PAGE

Chalmers, A. J.: Lichen scrofulosorum in Sudan..... 320
Sudanese examples of two common hyperkeratoses..... 323
Tricophyton currii..... 320
Chambers, H.: Experimental studies with small doses of X-rays..... 78
Chancre destroyed before its appearance; Mignot..... 453
extragenital, of mucous membrane of cheek; G. M. Olson..... 359
gonococcal; Burnier..... 67
indolent sores on fingers; R. W. MacKenna..... 450
of chin; E. W. Potthoff..... 480
on right tonsil; M. P. Parounagian..... 460
statistical study of extragenital chancres; H. W. Porter..... *15
Chancroid, treatment of, with high frequency vacuum electrode and copper sulphate solution; L. H. Jacob.....*434
Charcot's knees (syphilis congenital); J. J. Rothwell..... 706
Chargin, L.: Annular lichen planus..... 329
Erythema solare perstans lupus erythematous disseminatus..... 347
Papulonecrotic tuberculid..... 337
Prurigo lymphatica..... 333
Syphilitic reinfection..... 112
Chargin, W. J.: Darier's disease..... 710
Cheilitis glandularis; M. B. Hartzell, 104; F. Wise..... 468
Chickenpox: See Varicella
Cockayne, E. A.: Acute striae atrophicae following influenzal pneumonia.. 212
Cole, H. N.: Report of two cases of idiopathic hemorrhagic sarcoma (Kaposi) first complicated with lymphatic leukemia.....*283
Colloid milium; W. B. Trimble.....465; 700
or hyaline degeneration of skin; Gilchrist..... 106
Complement serum, preservation of; J. A. Kolmer, T. Matsunami and M. E. Trist..... 207
Condyloma, infective, of mouth; Wile..... 97
Connal, A.: Treatment of leprosy..... 319
Courtois-Suffit: Dermatologic malingering..... 66
Craik: Simple treatment of ringworm of nails..... 696
Creeping eruption: See Larva migrans
Cretinism, circumscribed scleroderma of face associated with cretinism; Schamberg 99
Crump, E. S.: Report of two cases of idiopathic hemorrhagic sarcoma (Kaposi) first complicated with lymphatic leukemia.....*283
Culver, G. D.: Case illustrating value of radium in verrucae planae..... 697
Clinical study of lichen planus..... *43

Dactylitis syphilitica; B. Lapowski..... 340
Darier, J.: Dyshidrosis; its parasitic nature..... 447
Darier's disease; W. J. Chargin..... 710
Day, A. B.; Incidence of syphilis as manifested by routine Wassermann reaction on 2,925 hospital and dispensary medical cases..... 210
Delhi boil; H. MacCormac..... 65
Denéchau, D.: Epidemic encephalitis..... 689
Denny, O. E.: Photographic study of leprosy..... 66
Dercum, F. X.: Functions of cerebrospinal fluid with special considerations of spinal drainage and of intraspinal injections of arsphenamized serum 579

PAGE

Dermatitis exfoliativa; Stillians 745
exfoliativa and psoriasis; E. W. Abramowitz 713
exfoliativa due to arsphenamin; report of fatal case; J. R. Latham 69
exfoliativa, of fingers; Stillians 90
exfoliativa, vaccine therapy; W. S. Gottheil 458
for diagnosis (bullous dermatitis herpetiformis or erythema multiforme); W. S. Gottheil 217
herpetiformis; Pusey 744
herpetiformis, universal dermatitis following; Hartzell 100
medicamentosa; I. Rosen 355
premycotic dermatitis; W. A. Stillians 611
psoriasis, seborrheic dermatitis and pityriasis rosea; W. A. Pusey and F. E. Senear 589
repens; O. S. Ormsby and Mitchell 598
universal exfoliative dermatitis from sodium cacodylate; W. A. Pusey .. *57
universal, following dermatitis herpetiformis; Hartzell 100
Dermatologic misnomers; M. Scholtz, *182; G. H. Fox 443
Dermatoses, precancerous dermatoses; further course of two cases previously reported; J. T. Bowen *23
Dermatothlasia (so called pickers' disease); F. Wise 222
Devergie's disease; E. P. Zeisler 93
Devota, F. J.: Intravenous injection of potassium iodid in tabes dorsalis ... 76
Diarsenol, effect of intravenous diarsenol; W. C. Rappleye 69
Diathermy; N. Patterson 448
Disinfectors, experiments with steam disinfectors in destroying lice in clothing; R. H. Hutchinson 324
Driscoll, T. L.: Erosive vulvitis *170
Drug eruption: See under Apothesin; Arsphenamin; Bromid; Intramine; Quinin; Sodium cacodylate
Dublin, L. I.: Mortality statistics of cancer among wage earners; with observations on comparative incidence of disease in general population 72
Dubreuilh: Acanthosis nigricans or melanotic cancerous papillomata 66
Dudley, S. F.: Primary syphilis 79
Dujardin: Vitiligo and its relation to syphilis, acquired or hereditary ... 213
Dyke, S. C.: Keratodermia blennorrhagica 447
Dyshidrosis: Its parasitic nature; J. Darier 447
Dystrophies and hereditary syphilis; V. Hutinel and H. Stevenin 575

Eberson, F.: "Spirochetes" derived from red blood corpuscles *638
Ectodermal defect, congenital, with report of case; W. H. Goeckermannn .. *396
Eczema; W. A. Pusey and F. E. Senear 609
etiology of eczema; H. H. Hazen *642
folliculitis decalvans with seborrheic eczema; F. Wise 468
from dermatological point of view; G. M. MacKee 70
new notes on eczemas; L. Brocq 66
of nipples; W. B. Trimble 464
persistent; D. Lieberthal 483
Eczematoid infectious dermatitis; E. P. Zeisler 476
Edema, chronic, of eyelids; H. Fox 718
Elephantiasis, filarial; L. T. Wright 336
Ellis, H. A.: Picric-brass preparations in lupus and other forms of tuberculosis 77

PAGE

Encephalitis, epidemic; D. Denéchau 689
Endomyces, cultural studies on an infection of skin by endomyces albicans; F. W. Tanner and B. Feuer *365
Engman, M. F.: Burning tongue *137
Monilia candida infection of mouth; Moeller's disease, pneumococcus infection of tongue, etc *119
Peculiar fungus infection of skin (soorpilze) *70
Epidermolysis bullosa; L. C. Pardee 92
Epidermophyton infection; E. P. Zeisler 599
infection, "epidermophytosis"; M. B. Hutchins 63
Epithelioma (?); F. Wise 739
benign cystic epithelioma (Brooke-Fordyce type); M. B. Hartzell 103
multiple benign cystic epithelioma; G. M. MacKee 346
multiple benign cystic epithelioma and syringoma; F. Wise 357
of lip; J. J. Rothwell, 332; M. Parounagian 335
of nose; J. Kingsbury 725
of penis; healed by curettage and acid nitrate of mercury; W. B. Trimble. 733
of tonsils, with syphilitic condition; M. B. Parounagian 458
of upper lip; superficial flat type; W. B. Trimble 466
squamous-cell, of lip; A. C. Broders 685
treatment of, by radium; R. H. Boggs 73
unusually large primary epithelioma of ocular conjunctiva; C. A. Vessey. 697
Erythema, acute, resembling measles; F. H. Kelly 76
arsenical; M. G. Milian 578
chronic, of face (for diagnosis); W. B. Trimble 699
ichthyotic condition with erythema (for diagnosis); H. H. Whitehouse.. 724
induratum of legs with tuberculids of fingers; D. Lieberthal 590
migrans (geographical tongue); B. F. Ochs and Feldman 219
nodosum, cerebrospinal fever supervening; J. C. Meakins 586
nodosum syphiliticum; A. W. Stillians and F. E. Senear 607
perstans; A. J. Gilmour, 349, 351; J. M. Winfield 727; Wise 739
solare perstans? lupus erythematosus disseminatus; L. Chargin 347
Esophylaxis, protective function of skin (esophylaxis); E. Hoffmann 321
Estes W. L., Jr.: Study of causes of delayed union and nonunion in fractures of long bones 326
Ewing, J.: Some late and distant effects of radium 70
Excoriations, neurotic; G. M. MacKee 229; *256
neurotic, with leukoderma-like lesions; M. Parounagian 742
neurotic, with report of cases; W. A. Pusey and F. E. Senear *270
Eyelids, chronic edema of; H. Fox 718
multiple vaccination of eyelids; A. J. Bedell 584

Face, chronic congestion of face; for diagnosis; W. B. Trimble 466
hemiatrophy of face and scalp; O. L. Levin 709
Favre, M.: Cancer of face resembling actinomycosis 452
Favus, contagiousness of, in man; B. Sabouraud 448
Feer, E.: Varicella and herpes zoster 693
Feldman: Geographical tongue (erythema migrans) 219
Fernet, P.: Case of calcareous deposits in skin 586
Semeiologic value of buccal leukoplakia 206
Ferrand, M.: Early diagnosis of cancer of tongue 207
Feuer, B.: Cultural studies on infection of skin by endomyces albicans *365
Fingers, indolent sores on fingers; R. W. MacKenna 450

PAGE

Finnerud: Carcinoma suggesting blastomycosis..... 589
Fischer, A.: Multiple tumors of mouse mamma; are they independent or metastatic 72
Fleischner, E. C.: Résumé of some experimental studies on cutaneous hypersensitiveness 208
Flick, A. M.: Human versus guinea-pig complement in serum diagnosis of syphilis with special reference to methods employing human complement 204
Floquet, A.: Filiform drainage in treatment of chancroidal bubos..... 325
Foerster, O. H.: Dermatology and associated disorders of mucous membranes 69
Foley, F. E. B. Serious reactions from salvarsan and diarsenol brands of arsphenamin *25
Folliculitis decalvans and lichen spinulosus; O. S. Ormsby..... 471
decalvans with seborrheic eczema; F. Wise..... 468
Fordyce, J. A.: Extensive keloidal scarring after burn..... 730
Fox, G. H.: Dermatologic misnomers..... 443
Hypertrophic scars 224
New York Dermatological Society, semicentennial celebration..... 80
Tinea cruris 224
Tinea unguium 722
Fox, H.: Angioma serpiginosum..... 461
Chronic edema of eyelids..... 718
For diagnosis: lupus erythematosus vs. lupus vulgaris..... 714
Hodgkin's disease associated with cutaneous tumors..... 731
Lichen scrofulosorum 354
Lupus vulgaris disseminatus..... 709
Lupus vulgaris (disseminated follicular type)..... 226
Lupus vulgaris (follicular disseminated type)..... 336
Multiple abscesses 716
Multiple pigmented hemorrhagic sarcoma..... 229
Nevus pigmentosus unilateralis..... 467
Fractures, causes of delayed union and nonunion in fractures of long bones; W. L. Estes..... 326
Françon: Gaseous gangrene in typhoid..... 581
Fraser, A. R.: Case of intramine dermatitis..... 326
Fraser, J. F.: Congenital syphilis..... 341
Pathology of congenital syphilis.....*491
Frothingham, C.: Diagnosis of late syphilis of central nervous system.... 74
Frozen sections, method of clearing; H. H. Bullard..... 68
Fruhwald: Treatment of syphilis with silver salvarsan..... 583
Fuchs, D.: Persistent salvarsan exanthema..... 698
Fungus, clearing house for cutaneous fungi and blastomyces; F. D. Weidman 683
peculiar fungus infection of skin (soorpilze); M. F. Engman.....*370

Gangrene, gaseous, in typhoid; M. M. Weinberg and Françon..... 581
Gauvain, H. J.: Chemotherapy in cutaneous tuberculosis..... 77
Gerbay: Intramuscular arsenical treatment..... 452
Geroderma: See Wrinkled skin.
Gibson, H. E.: Comparison of two methods of administering arseno-benzol compounds in syphilis..... 453
Gilchrist: Colloid or hyaline degeneration of skin..... 106
Pityriasis rubra pilaris on body associated with lichen planus in mouth 105

PAGE

Gilmour, A. J.: Case for diagnosis 701
Erythema perstans 349, 351
Milium with calcareous degeneration 352
Scleroderma 721
Syphilodermata after intensive treatment 742
Glanders, acute, in man; T. Hunter 695
Glasson: Method of treating tinea 581
Glossitis; F. Wise 726
Moeller's; A. Rostenberg 116; 335
Goeckermann, W. H.: Congenital ectodermal defect, with report of case *396
Gonorrhea, case of gonorrhea with arthritis and keratoses; N. P. Lang 77
Goodman, H.: Intensive treatment of women with neodiarsenol 211
Ulcerating granuloma of pudenda *151
Goodpasture, E. W.: Old age in relation to cell-overgrowth and cancer 67
Gottheil, W. S.: Dermatitis exfoliativa 458
For diagnosis (bullous dermatitis herpetiformis or erythema multiforme) 217
Leprosy 217
Graham-Little, E. G.: Case for diagnosis 64
Grant, C. V.: Ivy and sumac poisoning 688
Granuloma fungoides; Hartzell 105
inguinale tropicum; A. W. Stillians 471
necrotic; W. B. Trimble 702
pyogenicum of lip; S. E. Sweitzer 358
ulcerating, of pudenda, review of literature with bibliography and some observations of disease as seen in Porto Rico; H. Goodman *151
Gray, A. M. H.: Angioma serpiginosum 64
Lupus erythematosus 64
Gumma, heart block caused by gumma of septum; F. W. Bridgeman and H. C. Schmeisser 68
multiple; O. L. Levin 223
of breast; L. Thompson 695
of forehead; M. B. Parounagian 738
of tongue; M. B. Parounagian 456
of tongue and epithelioma; B. Lapowski 344
of tongue: epitheliomatous degeneration; C. M. Williams 701
scrofulous, after roentgen treatment; G. M. MacKee 228
Gummatous osteitis of skull, surgical treatment of; A. W. Adson 584

von Haecke: Vitiligo and its relation to syphilis, acquired or hereditary .. 213
Haguenau, J.: Icterus observed in course of neoarsphenamin treatment ... 692
Hailperin, C. J.: Case for diagnosis 706
Hair follicles, hyperkeratosis of hair follicles in scurvy; H. Wiltshire 447
Halsey, C. K.: Serologic cure in light of increasingly sensitive Wassermann tests 68
Handley, W. S.: Paget's disease of nipple 210
Hansen's disease; A. W. Stillians and F. E. Senear 588
Harris: Case of facial sarcoid 93
Lingua nigra 93
Xeroderma pigmentosa 90
Hartzell, M. B.: Benign cystic epithelioma 103
Case for diagnosis 102, 104
Cheilitis glandularis 104
Granuloma fungoides 105

Hartzell, M. B.—Continued PAGE
Leukemia cutis 106
Two unusual cases of ringworm, one of them due to fungus (trichophyton rosaceum) producing pink cultures..... *1
Universal dermatitis following dermatitis herpetiformis..... 100
Vitiligo 101
Xeroderma pigmentosum acquisita..... 97
Havre, S. J.: Relation of aortic insufficiency to Wassermann test..... 325
Hazen, H. H.: Etiology of eczema..... *642
Postinfluenzal alopecia 68
Treatment of late syphilis..... 211
Heart block caused by gumma of septum; F. W. Bridgeman and H. C. Schmeisser 68
Hemiatrophy of face; O. L. Levin..... 457
of face and scalp; O. L. Levin..... 709
Herpes zoster and varicella; E. Feer..... 693
of glosso-pharyngeal nerve; C. T. Neve..... 450
Highman, W. J.: Involuted mycosis fungoides..... 715
Lupus erythematosus disseminatus..... 227
Lupus erythematosus in man of 45..... 729
Prurigo nodularis 720
Purpura annularis telangiectoides..... 227
Radio-dermatitis 712
Tyranny of Wassermann test..... 194
Hill, E.: Studies in X-ray effects; direct action of X-rays on transplantable cancers of mice..... 76
Hodgkin's disease associated with cutaneous tumors; H. Fox..... 731
Hoffmann, E.: Protective function of skin (esophylaxis)..... 321
Hollander, L.: Urticaria probably due to syphilis..... *55
Howell, B. W.: Nevus of lower lip and lymphangioma of tongue..... 696
Hunter, T.: Acute glanders in man..... 695
Hutchins, M. B.: Epidermophyton infection, "epidermophytosis"..... 63
Hutchinson, R. H.: Experiments with steam disinfectors in destroying lice in clothing 324
Hutinel, V.: Hereditary syphilis and dystrophies..... 575
Hydrargism: See Mercurialism.
Hyperhidrosis, case of acquired circumscribed hyperhidrosis; W. A. Pusey. *438
localized; W. A. Pusey and F. E. Senear..... 472
Hyperkeratosis and pigmentation; O. L. Levin..... 720
of hair follicles in scurvy; H. Wiltshire..... 447
Sudanese examples of two common hyperkeratoses; A. J. Chalmers and A. Innes 320
Hyperpigmentation; O. S. Ormsby and Mitchell..... 474
of body occurring in spots; Strickler..... 99
Hypersensitiveness, résumé of some experimental studies on cutaneous hypersensitiveness; E. C. Fleischner, K. F. Meyer and E. B. Shaw.. 208

Ichthyosis vulgaris and von Recklinghausen's disease; E. W. Abramowitz 345
Ichthyotic condition with erythema (for diagnosis); H. H. Whitehouse.. 724
Icterus: See Jaundice.
Ind, C.: Cure of multiple warts on face..... 449
Indolent sores on fingers; R. W. MacKenna..... 450
Influenza, acute striae atrophicae following influenzal pneumonia; E. A. Cockayne 212
postinfluenzal alopecia; H. H. Hazen..... 68
Innes, A.: Lichen scrofulosorum in Sudan..... 320
Sudanese examples of two common hyperkeratoses..... 320
Intramine dermatitis, case of; A. R. Fraser..... 326
Irvine, H. G.: Psoriasis and leukoplakia..... 359
Irving, G.: Sublimed sulphur in mercurialism..... 585
Itching, chronic papular itching eruption of axillae and pubes (Fordyce); S. M. Withers..... *8
eruption (for diagnosis); E. L. McEwen..... 604
Ivy and sumac poisoning; E. A. Sweet and C. V. Grant..... 688

PAGE

Jacob, L. H.: Treatment of chancroid with high frequency vacuum electrode and copper sulphate solution *434
Jaundice observed in course of neoarsphenamin treatment; J. Haguenau and C. Kudelski 692
preliminary report on syphilitic and arsenical jaundice; G. O. Scott 208

Kaplan, D.: Syphilis and its serological significance 454
Kaposi's sarcoma: See Sarcoma.
Keane, W. E.: Diagnosis of primary syphilis by culture 582
Kelly, F. H.: Acute erythema resembling measles 76
Keloid, extensive keloid scarring after burn; F. Wise and J. A. Fordyce .. 730
technic in radium treatment of keloid and other common skin lesions; R. Taft 698
Kennaway, E. L.: Complement fixation test in syphilis 206
Wassermann tests; occurrence of variations in results of successive tests 79
Keratodermia blennorrhagica; S. C. Dyke 447
familial, and strabismus; J. F. Schamberg 100
syphilitic; E. P. Zeisler 746
Keratosis, case of gonorrhea with arthritis and keratoses; N. P. Lang 77
follicularis; J. L. Bunch 65
of lip; Schamberg 103
solar, and cutaneous cancer; J. N. McCoy *175
Kidney, syphilis of kidney, ureter and suprarenal; U. J. Wile *413
Kime, R. R.: Treatment of larva migrans, or creeping eruption 454
Kimura, N.: Effects of X-ray irradiation on living carcinoma and sarcoma cells in tissue cultures in vitro 71
Kingery, L. B.: Saturation in roentgen therapy: its estimation and maintenance *423
Kingsbury, J.: Epithelioma of nose 725
Leprosy 729
Paraffinoma 737
Klauder, J. V.: Early neurosyphilis asymptomatica 209
Knox, R.: X-Ray therapy 446
Kolmer, J. A.: Hemolytic activity of solutions of arsphenamin and neoarsphenamin 690
Human versus guinea-pig complement in serum diagnosis of syphilis with special reference to methods employing human complement ... 204
Laboratory and clinical studies bearing on causes of reactions following intravenous injections of arsphenamin and neo-arsphenamin *235
Preservation of complement serum 207
Kraurosis, precancerous lesions of skin of vulva; leukoplakic vulvitis, kraurosis, pruritus; F. J. Taussig *621
Kromayer light treatment of lupus vulgaris; J. J. Rothwell 328
Kudelski, C.: Icterus observed in course of neo-arsphenamin treatment ... 692

Lane, J. E.: Case for diagnosis 110
Vitiligo and syphilis: an examination of evidence for syphilitic origin of vitiligo 69
Lang, N. P.: Gonorrhea with arthritis and keratoses 77
Lantuejoul, P.: Motor troubles in zona 323
Lapowski, B.: Annular psoriasis 335
Carcinoma in syphilitic patient 330
Dactylitis syphilitica 340
Gumma of tongue and epithelioma 344
Pellagra 339
Psoriasis (palm, body) 335
Syphilis palmaris and leucoplakia of tongue and cheeks 335
Syphilis tuberculo-verrucosa 346
Syphilis verruco-tuberculosa 339
Larva migrans, treatment of creeping eruption or; R. R. Kime 454
Latham, J. R.: Exfoliative dermatitis due to arsphenamin, report of fatal case 69
Le Clerc-Dandoy, L.: Venereal prophylaxis 213
Leishmaniasis, "bosch-yaws," the dermal leishmaniasis of Dutch Guiana; E. Bonne 320
Leonard, L. G.: Comparative value of novarsenobillon by intravenous and intramuscular methods 449
Severe dermatitis during treatment with novarsenobillon 451

PAGE

Leprosy; W. S. Gottheil, 217; J. M. Armstrong, 360; J. Kingsbury..... 729
photographic study of leprosy; O. E. Denny..... 66
treatment of; A. Connal..... 319
Leptothrix; D. B. Phemister..... 592
Leukemia cutis; M. B. Hartzell..... 106
report of two cases of idiopathic hemorrhagic sarcoma (Kaposi) first complicated with lymphatic leukemia; H. N. Cole and E. S. Crump..*283
Leukoderma, familial leukonychia and leukoderma; H. C. Samuel..... 696
neurotic excoriations with leukoderma-like lesions; W. B. Parounagian.. 742
Leukonychia, familial leukonychia and leukoderma; H. C. Samuel..... 696
Leukoplakia and psoriasis; H. G. Irvine..... 359
precancerous lesions of skin of vulva; leukoplakic vulvitis, kraurosis, pruritus; F. J. Taussig.....*621
semeiologic value of buccal leukoplakia; P. Fernet..... 206
syphilis palmaris and leucoplakia of tongue and cheeks; B. Lapowski... 335
Levin, O. L.: Case for diagnosis..... 701
Case for diagnosis (ringworm?)..... 353
Hemiatrophia facialis 457
hemiatrophy of face and scalp..... 709
Lupus erythematosus 735
Lupus erythematosus in syphilitic patient..... 219
Lupus vulgaris 705
Multiple benign tumor-like new growths..... 456
Multiple gummas 222
Pigmentation and hyperkeratosis..... 720
Pityriasis rubra pilaris..... 218
Sarcoid 710
Scleroderma in child..... 215
Levin, W.: Incidence of syphilis among white and colored troops as indicated by an analytical study of Wassermann results in over 10,000 cases 325
Lewis, P. O.: One aspect of syphilis as community problem..... 74
Lice, experiments on destruction of lice and nits; A. Bacot and G. Talbot 450
experiments with steam disinfectors in destroying lice in clothing; R. H. Hutchinson 324
Lichen nitidus; W. B. Trimble.....468, 721
planus annularis; Ormsby, 94; W. B. Parounagian, 219; J. J. Rothwell, 328; L. Chargin and E. W. Abramowitz..... 329
planus, clinical study; G. D. Culver..... *43
planus, generalized; F. Wise..... 467
planus hypertrophicus with follicular lesions; F. Wise..... 222
planus, pityriasis rubra pilaris on body associated with lichen planus in mouth; Gilchrist 105
planus, three cases of, in children; H. G. Adamson..... 582
sclerosis or atrophicus; B. J. Ochs, 216; W. A. Pusey and F. E. Senear, 610
scrofulosorum; H. Fox..... 354
scrofulosorum in Sudan; A. J. Chalmers and A. Innes..... 320
spinulosus and folliculitis decalvans; O. S. Ormsby..... 471
Lieberthal, D.: Blastomycosis..... 477
Case for diagnosis..... 92
Erythema induratum of legs with tuberculids of fingers..... 590
Pemphigus vulgaris 615
Persistent eczema 483
Tuberculosis of skin..... 476
Lingua nigra; Harris..... 93
Lip, epithelioma of lip; J. J. Rothwell, 332; M. Parounagian..... 335
epithelioma of upper lip; superficial flat type; W. B. Trimble..... 466
keratosis of lip; J. F. Schamberg..... 103
squamous-cell epithelioma of lip; A. C. Broders..... 685
Liver, atrophic cirrhosis of liver with inherited syphilis; C. Bonorino Udaondo and J. E. Carulla..... 586
syphilis of; U. J. Wile.....*139
tertiary syphilis of; H. L. Carretti..... 697
two unusual phases of hepatic syphilis; U. J. Wile.....*656
Low, R. C.: Tuberculids and their relation to tuberculosis of skin and other organs 577

PAGE

Lungs, pathologic study of lungs in 152 necropsy cases of syphilis; J. L. Carrera 451
Lunula, significance of lunula of nail; M. T. Burrows..... 68
Lupus erythematosus; A. M. H. Gray, 64; J. F. Schamberg, 99; A. W. Stillians, 479; O. S. Ormsby and J. H. Mitchell, 597; I. Rosen, 717; Levin 735
erythematosus and Raynaud's disease; O. S. Ormsby and Mitchell..... 613
erythematosus associated with streptococcal infection of tonsils; H. W. Barber 327
erythematosus disseminatus; F. Wise, 226; W. J. Highman, 226; L. Chargin 347
erythematosus in man of 45; W. J. Highman..... 729
erythematosus in syphilitic patient; O. L. Levin..... 219
erythematosus of face; tuberculosis of buttocks; papulonecrotic tuberculids of forearm; Scheer..... 111
erythematosus, osseous formation in; W. B. Trimble.....*296
erythematosus showing result of repeated applications of 95 per cent. phenol solution; P. E. Bechet..... 351
erythematosus, simple method of treatment; W. D. Small..... 210
erythematosus vs. lupus vulgaris, for diagnosis; H. Fox..... 714
miliary; MacKee 109
of upper air passages; R. Webber..... 451
picric-brass preparations in treatment of lupus and other forms of tuberculosis; H. A. Ellis..... 77
vulgaris; F. Wise, 229; M. Scheer, 344; O. L. Levin..... 705
vulgaris (disseminated follicular type); H. Fox..... 226
vulgaris disseminatus; H. Fox..... 709
vulgaris (follicular disseminated type); H. Fox..... 336
vulgaris (showing result of Kromayer light treatment); J. J. Rothwell 328
vulgaris, treatment of; R. W. McKenna.....201, 448
Lymphangioma circumscriptum; F. Wise..... 228
of tongue and nevus of lower lip; B. W. Howell..... 696
Lymphogranuloma; M. B. Parounagian..... 217

McConnell, G.: Delayed negative Wassermann reaction..... 326
MacCormac, H.: Delhi boil..... 65
McCoy, J. N.: Solar keratoses and cutaneous cancer.....*175
McDonagh, J. E. R.: Early nervous syphilis after arsenobenzene..... 687
Venereal diseases as we see them today..... 322
Macdonald, G.: Myositis ossificans..... 65
McEwen, E. L.: Case for diagnosis.....89, 469, 470
Itching eruption (for diagnosis)..... 604
Phagedenic ulcers 600, 601
Pigmentary syphilid 612
Swelling of neck: branchial cyst..... 598
Ulcer of foot..... 599
MacKee, G. M.: Eczema from dermatological point of view..... 70
Miliary lupus 109
Multiple benign cystic epithelioma..... 346
Neurotic excoriations 229, *256
Pigmentation with atrophoderma on right thigh..... 348
Scrofulous gummas after roentgen treatment..... 228
MacKenna, R. W.: Indolent sores on fingers..... 450
Treatment of lupus vulgaris.....201, 448
MacLeod, J. M. H.: Vaccines in treatment of cutaneous disease..... 213
McNitt, W.: Incidence of syphilis as manifested by routine Wassermann reaction on 2,925 hospital and dispensary medical cases..... 210
Macular atrophy following syphilis; E. P. Zeisler..... 747
McVail, J. C.: Milroy lectures on half a century of smallpox and vaccination 77
McWhirter, A. T.: Wassermann test; criticism of its reliability..... 78
Majocchi's disease; E. P. Zeisler..... 613
purpura annularis telangiectodes (Majocchi's disease); L. Weiss.....*520
Malingering, dermatologic; Courtois-Suffit and L. Miriel..... 66
Mann, F. C.: Attempts to obtain transplantable tumor in higher species of animals 324
Marshall, A.: Tricophyton currii..... 320

PAGE

Martin, F. A.: Icebox fixation method in performance of Wassermann reaction 587
Massia: Cancer of face resembling actinomycosis..... 452
Matsunami ,T.: Preservation of complement serum..... 207
Meakins, J. C.: Cerebrospinal fever supervening on erythema nodosum.. 586
Syphilitic aortic insufficiency..... 698
Melanoma; W. B. Trimble..... 700
Meningitis, cerebrospinal, supervening on erythema nodosum; J. C. Meakins 586
Mercurialism from application of weak ammoniated mercury ointment in treatment of psoriasis; P. E. Bechet.....*636
sublimed sulphur in mercurialism; G. Irving..... 585
Mercury, cyanide of mercury intravenously; L. Renard..... 325
Meyer, K. F.: Résumé of some experimental studies on cutaneous hypersensitiveness 208
Michael, M.: Treatment of trichophytosis..... 691
Michelson, H. E.: Pityriasis lichenoides chronica..... 358
Syphilitic eruption resembling herpes..... 359
Microscopy, method of clearing frozen section; H. H. Bullard..... 68
Mignot: Chancre destroyed before its appearance..... 453
Milian, M. G.: Arsenical erythema..... 578
Milium, colloid; W. B. Trimble.....465, 700
with calcareous degeneration; A. J. Gilmour..... 352
Miriel, L.: Dermatologic malingering..... 66
Mitchell, J. H.: Carcinoma suggesting blastomycosis..... 589
Case for diagnosis.....591, 594, 743, 744
Dermatitis repens 598
Hyperpigmentation 474
Linear nevus, psoriasiform type..... 614
Lupus erythematosus 597
Lupus erythematosus and Raynaud's disease..... 613
Phagedenic ulcer 478
Moeller's disease; monilia candida infection of mouth; Moeller's disease, pneumococcus infection of tongue, etc.; M. F. Engman.....*119
glossitis; A. Rostenberg.....116, 335
Mole, pigmented; J. M. Armstrong..... 360
Molluscum contagiosum; J. F. Waugh..... 593
Monilia candida infection of mouth; Moeller's disease, pneumococcus infection, of tongue, etc.; M. F. Engman and R. S. Weiss.....*119
Montgomery, D. W.: Case illustrating value of radium in verrucae planae 697
Mook, W. H.: Camphor oil tumors.....*304
Myiasis dermatosa *515
Skin reactions to apothesin and quinin in susceptible persons.....*651
Moore, J. E.: Serious reactions from salvarsan and diarsenol brands of arsphenamin *25
Morphea; J. J. Rothwell..... 337
linear; J. L. Bunch..... 695
Morton, J. J: Studies in X-ray effects; direct action of X-rays on transplantable cancers of mice..... 76
Motor paralysis in zona; E. Baudouin and P. Lantuejoul..... 323
Motram, J. C.: Experimental studies with small doses of X-rays..... 78
Mucous membranes, dermatology and associated disorders of mucous membranes; O. H. Foerster..... 69
membrane of mouth, tuberculosis of; Strickler..... 103
Murphy, J. B.: Studies on X-ray effects; destructive action on blood cells 74
Mycosis fungoides; P. E. Bechet..... 711
fungoides, involuted; W. J. Highman..... 715
Myiasis dermatosa; W. H. Mook.....*515
Myositis ossificans; G. Macdonald..... 65

Nahan: Case of calcareous deposits in skin..... 586
Nail, significance of lunula of; M. T. Burrows..... 68
simple treatment of ringworm of nails; Craik..... 696
Nakahara, W.: Studies on X-ray effects; changes in lymphoid organs after small doses of X-rays..... 75
Neck, swelling of neck: branchial cyst; E. L. McEwen..... 598

PAGE

Neo-arsphenamin, comparative value of novarsenobillon by intravenous and intramuscular methods; L. G. Leonard 449
hemolytic activity of solutions of arsphenamin and neo-arsphenamin; J. A. Kolmer and E. M. Yagle 690
icterus observed in course of neo-arsphenamin treatment; J. Haguenau and C. Kudelski 692
intensive treatment of women with neodiarsenol; H. Goodman 211
laboratory and clinical studies bearing on causes of reactions following intravenous injections of arsphenamin and neo-arsphenamin; second communication; J. F. Schamberg, J. A. Kolmer, G. W. Raiziss and C. Weiss *235
primary toxic effect of neo-salvarsan; K. Petren 446
severe dermatitis during treatment with novarsenobillon; L. G. Leonard 451
Neo-salvarsan: See Neo-arsphenamin.
Neurodermite; F. Wise 736
Neurofibroma; J. J. Rothwell 338
Neuroretinitis, syphilitic; H. V. Würdemann 585
Neurosyphilis: See Syphilis.
Neve, C. T.: Herpes zoster of glosso-pharyngeal nerve 450
Neve, E. F.: Cutaneous anthrax 449
Nevus lateralis, hyperkeratotic type; E. W. Abramowitz 344
linear, psoriasiform type; O. S. Ormsby and Mitchell 614
nonpigmented linear; A. W. Stillians 479
of lower lip and lymphangioma of tongue; B. W. Howell 696
pigmentosus unilateralis; H. Fox 467
pilosus et pigmentosus; Scheer 109
verrucosus; Abramowitz 111
New York Dermatological Society, semi-centennial celebration; G. H. Fox 80
Newcomer, H. S.: One aspect of syphilis as community problem 74
Nicholls, L.: Etiology of sprue, pellagra and scurvy 319
Nicholson, S. T.: Treatment of syphilis of central nervous system 213
Nicolas, J.: Cancer of face resembling actinomycosis 452
Nipples, eczema of; W. B. Trimble 464
Paget's disease of; W. S. Handley 210
Nits, experiments on destruction of lice and nits; A. Bacot and G. Talbot 450
Nordmann, A.: Syphilis without primary lesion 203
Novarsenobillon: See Neo-arsphenamin.

Obituaries:
Death's toll among American dermatologists 59
Frederick J. Leviseur, 1860-1920 572
Henry Weightman Stelwagon, 1853-1919 191
Joseph Zeisler, 1858-1919 61
W. S. Gottheil, 1859-1920 681
Ochs, B. F.: Alopecia totalis (treated with carbolic acid) 459
Blastomycosis 734
Geographical tongue (erythema migrans) 219
Lichen sclerosis or atrophicus 216
Old age in relation to cell-overgrowth and cancer; E. W. Goodpasture and G. B. Wislocki 67
O'Leary: Case for diagnosis 605
Oliver, M. S.: Case for diagnosis 481
Oliver, W. W.: Cultural studies on case of sprue 326
Olson, G. M.: Extragenital chancre of mucous membrane of cheek 359
Thrush 359
Veneroid ulcer *279
Oriental sore, photograph of; J. F. Waugh 478
Ormsby, O. S.: Case for diagnosis 591, 594
Dermatitis repens 598
Folliculitis decalvans and lichen spinulosus 471
Hyperpigmentation 474
Lichen planus annularis 94
Linear nevus, psoriasiform type 614
Lupus erythematosus 597
Lupus erythematosus and Raynaud's disease 613
Multiple idiopathic hemorrhagic sarcoma 603

Ormsby, O. S.—Continued PAGE
Phagedenic ulcer 478
Psoriasis 90
Sarcoid 480, 596
Osteitis, surgical treatment of gummatous osteitis of skull; A. W. Adson.. 584
Oulmann, L.: For diagnosis..... 740
Multiple verrucae 357
Owen, R. G.: Icebox fixation method in performance of Wassermann reaction 587

Paget's disease of nipple; W. S. Handley..... 210
Paraffinoma; J. Kingsbury..... 737
Parapsoriasis; E. P. Zeisler..... 610
lichenoides and psoriasiformis; J. F. Schamberg..... 101
Pardee, L. C.: Epidermolysis bullosa..... 92
Parounagian, M. B.: Alopecia totalis..... 220
Arsenical pigmentation 739
Case for diagnosis..... 221
Chancre on right tonsil..... 460
Epithelioma of lip..... 335
Epithelioma of tonsils, with syphilitic condition..... 458
Gumma of forehead..... 738
Gumma of tongue..... 456
Lichen planus annularis..... 219
lymphogranuloma 217
Neurotic excoriations with leukoderma-like lesions..... 742
Pityriasis rosea 221
Scleroderma treated by endocrins..... 460
Patterson, N.: Diathermy..... 448
Pellagra; B. Lapowski..... 339
etiology of sprue, pellagra and scurvy; L. Nicholls..... 319
Pemphigus; A. W. Stillians and F. E. Senear..... 614
chronic pemphigus vegetans of several years' duration; L. F. Barker and D. W. Carter, Jr..... 76
vulgaris; D. Lieberthal..... 615
Penis, epithelioma of penis healed by curettage and acid nitrate of mercury; W. B. Trimble..... 733
Percival, J. A.: Case of congenital multiple sarcomatosis..... 446
Pernet, G.: Shaving-brush anthrax of face..... 695
Petren, K: Primary toxic effect of neo-salvarsan..... 446
Phagedenic ulcer; O. S. Ormsby and Mitchell, 478; E. L. McEwen...600, 601
Phemister, D. B.: Leptothrix..... 592
Phenol, repeated application of 95 per cent. phenol solution in lupus erythematosus; P. E. Bechet..... 351
Picric-brass preparations in lupus and other forms of tuberculosis; H. A. Ellis 77
Pighini, G.: Early manifestations of syphilis of central nervous system in combatants 583
Pigmentary disease of skin, Schamberg's; H. G. Adamson..... 326
Pigmentation and hyperkeratosis; O. L. Levin..... 720
with atrophoderma on right thigh; G. M. MacKee..... 348
Pijper, A.: Damaged goods..... 454
Pityriasis lichenoides chronica; F. Wise, 352; H. E. Michelson..... 358
psoriasis, seborrheic dermatitis and pityriasis rosea; W. A. Pusey and F. E. Senear..... 589
rosea; M. B. Parounagian..... 221
rubra pilaris; Strickler, 101; O. L. Levin, 218; P. E. Bechet, 705; W. B. Trimble 732
rubra pilaris on body associated with lichen planus in mouth; Gilchrist 105
Pollitzer, S.: General prognosis of syphilis in light of recent progress.... 693
Porter, H. W.: Statistical study of extragenital chancres..... *15
Potassium iodid, intravenous injection of, in tabes dorsalis; F. J. Devota 76
Potthoff, E. W.: Case for diagnosis..... 482
Chancre of chin..... 480
Precancerous lesions: See Cancer.
Prime, F.: Effect of X-ray on tumors..... 71

PAGE

Pringle, J. J.: Probable early miscalled multiple idiopathic hemorrhagic sarcoma of Kaposi..... 64
Protein, incidence of protein sensitization in normal child; H. M. Baker.. 453
Prurigo lymphatica; L. Chargin..... 333
nodularis; Schamberg, 102; W. J. Highman..... 720
Pseudopelade; A. W. Stillians..... 476
Pseudopityriasis, cultural characters of tricophyton balcaneum cast., the cause of pseudopityriasis capitis; A. Castellani..... 321
Psoriasis; O. S. Ormsby..... 90
acute psoriasis and zoster; J. M. Winfield..... 728
and dermatitis exfoliativa; E. W. Abramowitz..... 713
and leukoplakia; H. G. Irvine..... 359
annular; B. Lapowski..... 335
hydrargism from application of weak ammoniated mercury ointment in treatment of psoriasis; P. E. Bechet.....*636
of palm and body; B. Lapowski..... 335
parasitic theory of; L. Bory..... 587
seborrheic dermatitis and pityriasis rosea; W. A. Pusey and F. E. Senear 589
Pubes, chronic papular itching eruption of axillae and pubes (Fordyce); S. M. Withers.....*8
Purpura annularis telangiectodes; W. J. Highman..... 227
annularis telangiectodes (Majocchi's disease); L. Weiss.....*520
Pusey, W. A.: Case of acquired circumscribed hyperhidrosis.....*438
Dermatitis herpetiformis 744
Eczema 609
Lichen sclerosis et atrophicus..... 610
Localized hyperhidrosis 473
Neurotic excoriations with report of cases.....*270
Psoriasis, seborrheic dermatitis and pityriasis rosea..... 589
Universal exfoliative dermatitis from sodium cacodylate..... *57

Quinin, skin reactions to apothesin and quinin in susceptible persons; W. H. Mook.....*651

Radio-dermatitis; W. J. Highman..... 712
Radium, case illustrating value of radium in verrucae planae; D. W. Montgomery and G. D. Culver..... 697
late and distant effects of; J. Ewing..... 70
pathological changes accompanying injections of an active deposit of radium emanation; intravenous and subcutaneous injections in white rat; H. J. Bagg..... 580
technic in radium treatment of keloid and other common skin lesions; R. Taft 698
therapy, status of radium-therapy in dermatology; W. H. B. Aikins.. 581
treatment of epithelioma; R. H. Boggs..... 73
Raiziss, G. W.: Laboratory and clinical studies bearing on causes of reactions following intravenous injections of arsphenamin and neo-arsphenamin *235
Rappleye, W. C.: Effect of intravenous diarsenol..... 69
Raynaud's disease and lupus erythematosus; O. S. Ormsby and Mitchell 613
Recklinghausen's disease; J. F. Waugh..... 609
ichthyosis vulgaris and von Recklinghausen's disease; E. W. Abramowitz 345
Regan, C., and Regan, J. C.: Human anthrax..... 72
Remer, J.: Practical method of roentgen-ray dosage without aid of radiometer *558
Renard, L.: Cyanide of mercury intravenously..... 325
Rhus poisoning: See Ivy poisoning.
Ribbert, H.: Origin of tumors..... 587
Richardson, R.: One aspect of syphilis as community problem..... 74
Rille: Treatment of syphilis with silver salvarsan..... 583
Ringworm, need for study of ringworm in America..... 440
simple treatment of ringworm of nails; Craik..... 696
two unusual cases of ringworm, one of them due to fungus (trichophyton rosaceum) producing pink cultures; M. B. Hartzell..... *1

PAGE

Roberts, P. W.: Congenital syphilis in orthopedic clinics 210
Roentgen ray, changes in lymphoid organs after small doses of X-rays; W. Nakahara 75
destructive action on blood cells; H. D. Taylor, W. D. Witherbee and J. B. Murphy 74
direct action of X-rays on transplantable cancers of mice; E. Hill, J. J. Morton and W. D. Witherbee 76
effect of, on tumors; F. C. Wood and F. Prime 71
effects of X-ray irradiation on living carcinoma and sarcoma cells in tissue cultures in vitro; N. Kimura 71
experimental studies with small doses of X-rays; S. Russ, H. Chambers, G. Scott and J. C. Motram 78
physics of roentgen ray; J. S. Shearer *664
practical method of roentgen ray dosage without aid of radiometer; W. D. Witherbee and J. Remer *558
stimulative action of, on lymphocytes; M. M. Thomas, H. D. Taylor and W. D. Witherbee 75
treatment; R. Knox 446
treatment, saturation in roentgen therapy: its estimation and maintenance; preliminary report; L. B. Kingery *423
treatment, scrofulous gummas after; G. M. MacKee 228
Rosen, I.: Adenoma sebaceum 329
Dermatitis medicamentosa 355
Lupus erythematosus 717
Papulo-necrotic tuberculid 350
Ulerythema ophryogenes 353
Rostenberg, A.: Moeller's glossitis 116, 335
Tuberculosis mucosae oris 708
Rothwell, J. J.: Adenoma sebaceum 700
Annular lichen planus 328
Charcot's knees (syphilis congenita) 706
Epithelioma of lip 332
Lupus vulgaris (showing result of Kromayer light treatment) 328
Morphea 337
Neurofibroma 338
Russ, S.: Experimental studies with small doses of X-rays 78
Rutherford, W. J.: Epidemic of alopecia 580

Sabouraud, R.: Contagiousness of favus in man 448
Samuel, H. C.: Familial leukonychia and leukoderma 696
Sarcoid; O. S. Ormsby, 480, 596; O. L. Levin 710
facial; Harris 93
Sarcoma, congenital multiple sarcomatosis; J. A. Percival 446
effects of X-ray irradiation on living carcinoma and sarcoma cells in tissue cultures in vitro; N. Kimura 71
Kaposi's; W. B. Trimble 332
multiple idiopathic hemorrhagic sarcoma; O. S. Ormsby 603
multiple pigmented hemorrhagic sarcoma; H. Fox 229
multiple pigmented idiopathic sarcoma (Kaposi); E. F. Skinner 213
probable early miscalled multiple idiopathic sarcoma of Kaposi; J. J. Pringle 64
report of two cases of idiopathic hemorrhagic sarcoma (Kaposi) first complicated with lymphatic leukemia; H. N. Cole and E. S. Crump *283
Scalp, hemiatrophy of face and scalp; O. L. Levin 709
Scars, hypertrophic scars; G. H. Fox 224
peculiar scarring in North African negro; F. Wise 222
Schamberg, J. F.: Circumscribed scleroderma of face associated with cretinism 99
Familial keratodermia and strabismus 100
Keratosis of lip 103
Laboratory and clinical studies bearing on causes of reactions following intravenous injections of arsphenamin and neo-arsphenamin *235

	PAGE
Schamberg, J. F.—Continued	
Lupus erythematosus	99
Parapsoriasis lichenoides and psoriasiformis	101
Prurigo nodularis	102
Unilateral acromegaly	104
Xanthoma diabeticorum	98
Schamberg's peculiar progressive pigmentary disease of skin; H. G. Adamson	326
Scheer, M.: Congenital syphilis? syphilid post erosive	344
Lupus erythematosus of face; tuberculosis of buttocks; papulonecrotic tuberculids of forearm	111
Lupus vulgaris	344
Nevus pilosus et pigmentosus	109
Schmeisser, H. C.: Heart block caused by gumma of septum	68
Scholtz, M.: Acrodermatitis chronica atrophicans with report of case	*565
Dermatologic misnomers	*182
Sclerodactylia and scleroderma; report of case with roentgen rays and review of literature; R. M. Atwater	73
necropsy findings in case of congenital scleroderma and sclerodactylia; F. D. Weidman	*375
Scleroderma; F. H. Barendt, 697; A. J. Gilmour	721
and sclerodactylia; report of case with roentgen rays and review of literature; R. M. Atwater	73
circumscribed, of face associated with cretinism; J. F. Schamberg	99
in child; O. L. Levin	215
necropsy findings in case of congenital scleroderma and sclerodactylia; F. D. Weidman	*375
treated by endocrines; M. B. Parounagian	460
Scott, G.: Experimental studies with small doses of X-rays	78
Preliminary report on syphilitic and arsenical jaundice	208
Scurvy, etiology of sprue, pellagra and scurvy; L. Nicholls	319
hyperkeratosis of hair follicles in scurvy; H. Wiltshire	447
Semon, H. C.: Sycosis barbae	321
Senear, F. E.: Blastomycosis	589
Case for diagnosis	476, 609
Eczema	609
Erythema nodosum syphiliticum	607
Hansen's disease	588
Lichen sclerosis et atrophicus	610
Localized hyperhidrosis	472
Neurotic excoriations with report of cases	*270
Pemphigus	614
Psoriasis, seborrheic dermatitis and pityriasis rosea	589
Sequeira, J. H.: Vaccine therapy in diseases of skin	209
Shaw, B. H.: Action of syphilis on native complement	449
Shaw, E. B.: Résumé of some experimental studies on cutaneous hypersensitiveness	208
Shearer, J. S.: Physics of roentgen ray	*664
Silver salvarsan: See Arsphenamin.	
Sireci, D.: Action of ultraviolet rays on blood serum, leukocytes and bacteria	696
Skin, atrophy of; A. W. Stillians	595
calcareous deposits in skin; Fernet and Nahan	586
diseases, vaccines in treatment of; J. M. H. MacLeod and W. W. C. Topley	213
diseases, vaccine therapy in; J. H. Sequeira and G. T. Western, 209; A. Whitfield	211
protective function of skin (esophylaxis); E. Hoffmann	321
Skinner, E. F.: Multiple pigmented idiopathic sarcoma (Kaposi)	213
Slye, M.: Relation of inbreeding to tumor production; studies in incidence and inheritability of spontaneous tumors in mice	698
Small, W. D. D.: Lupus erythematosus, simple method of treatment	210
Smallpox, Milroy lectures on half century of smallpox and vaccination; J. C. McVail	77

PAGE

Smith, J. F.: Case of papula necrotic tuberculid 212
Society Transactions:
American Dermatological Association 97
Chicago Dermatological Society 89, 469, 478, 588, 743
Manhattan Dermatological Society 215, 350, 456, 734
Minnesota Dermatological Society 358
New York Academy of Medicine, Section on Dermatology and Syphilis 109, 328, 341, 699, 714
New York Dermatological Society 80, 223, 461, 722, 731
Sodium cacodylate, universal exfoliative dermatitis from; W. A. Pusey .. *57
Solar keratoses and cutaneous cancer; J. N. McCoy *175
Solomon, H. C.: Agreement in results of Wassermann reaction 692
Nonconcomitance of spinal fluid tests 323
Soorpilze, peculiar fungus infection of skin (soorpilze?); M. F. Engman .. *370
Souques, A.: Gerodermie infantile 584
"Spirochetes" derived from red blood corpuscles; F. Eberson *638
Spleen, size of spleen in immune mice; W. H. Woglom 72
Spore identifications in scrapings; R. W. Bachman *50
Sprue, cultural studies on; W. W. Oliver 326
etiology of sprue, pellagra and scurvy; L. Nicholls 319
Steam disinfectors for destroying lice in clothing; R. H. Hutchinson 324
Steatoma; A. W. Stillians 96
Stern, C.: Avoidance of untoward results following arsphenamin administration 206
Stevenin, H.: Hereditary syphilis and dystrophies 575
Stillians, A. W.: Atrophy of skin 595
Blastomycosis 94, 589
Case for diagnosis 95, 469, 470, 477
Erythema nodosum syphiliticum 607
Exfoliative dermatitis 745
Exfoliative dermatitis of fingers 90
Granuloma inguinale tropicum 471
Hansen's disease 588
Lupus erythematosus 479
Macular atrophy of skin 484
Nonpigmented linear nevus 479
Pemphigus 614
Premycotic dermatitis 611
Pseudopelade 476
Steatoma 96
Sycosis vulgaris 745
Stokes, J. H.: Arsphenamin treatment of tuberculids 573
Clinical studies on cutaneous aspects of tuberculosis; therapeutic management of tuberculids with specific reference to efficiency of arsphenamin 72
Stomach, syphilis of stomach; U. J. Wile *543
Stone, W. S.: Study of chemical composition of blood in cancer 324
Strabismus, familial keratodermia and strabismus; J. F. Schamberg 100
Striae, acute striae atrophicae following influenzal pneumonia; E. A. Cockayne 212
Strickler: Acnitis 102
Addison's disease 101
Hyperpigmentation of body occurring in spots 99
Pityriasis rubra pilaris 101
Tuberculosis of mucous membrane of mouth 103
Sulfarsenol, intramuscular arsenical treatment; L. Gerbay 452
Sulphur, sublimed sulphur in mercurialism; G. Irving 585
Sumac and ivy poisoning; E. A. Sweet and C. V. Grant 688
Suprarenal, syphilis of kidney, ureter and suprarenal; U. J. Wile *413
Sutton, R. L.: Urticaria probably due to syphilis 200
Sweet, E. A.: Ivy and sumac poisoning 688

PAGE

Sweitzer, S. E.: Granuloma pyogenicum of lip 358
Sycosis barbae; H. C. Semon 321
vulgaris; Stillians 745
Syphilid, pigmentary; E. L. McEwen 612
Syphilis, action of syphilis on native complement; B. H. Shaw 449
allergy in syphilis of nervous system; Babonneix 67
and its serological significance; D. Kaplan 454
atrophic cirrhosis of liver with inherited syphilis; C. Bonorino Udaondo and J. E. Carulla 586
carcinoma in syphilitic patient; B. Lapowski 330
causes of delayed union and nonunion in fractures of long bones; W. L. Estes 326
cerebrospinal fluid in syphilis; C. F. White and H. Barber 212
Charcot's knees (syphilis congenita); J. J. Rothwell 706
common diseases in British hospitals as seen in Sierra Leone; W. A. Young 319
complement fixation test in syphilis; C. H. Browning and E. L. Kennaway 206
congenital; J. F. Fraser 341
congenital, in orthopedic clinics; P. W. Roberts 210
congenital, pathology of; J. F. Fraser *491
congenital syphilis? syphilid post-erosive; M. Scheer 344
damaged goods; A. Pijper 454
delaying early diagnosis of syphilis (chancre), dangers and how to avoid them; W. Abramowitz 212
diagnosis of late syphilis of central nervous system; C. Frothingham .. 74
diagnosis of primary syphilis by culture; F. W. Baeslack and W. E. Keane 582
early manifestations of syphilis of central nervous system in combatants; G. Pighini 583
early nervous syphilis after arsenobenzene; J. E. R. McDonagh 687
early neurosyphilis asymptomatica with report of observations; J. V. Klauder 209
hereditary and dystrophies; V. Hutinel and H. Stevenin 575
human versus guinea-pig complement in serum diagnosis of syphilis with special reference to methods employing human complement; J. A. Kolmer and A. M. Flick 204
incidence of, among white and colored troops as indicated by an analytical study of Wassermann results in over 10,000 cases; W. Levin 325
incidence of syphilis as manifested by routine Wassermann reaction on 2,925 hospital and dispensary medical cases; A. B. Day and W. McNitt 210
macular atrophy following syphilis; Zeisler 747
of bladder; L. Thompson 694
of great vessels; A. F. Tyler 695
of kidney, ureter and suprarenal; U. J. Wile *413
of liver; U. J. Wile *139
of liver, two unusual phases of hepatic syphilis; U. J. Wile *656
one aspect of syphilis as community problem; H. S. Newcomer, C. Ashbrooke, R. Richardson and P. O. Lewis 74
palmaris and leucoplakia of tongue and cheeks; B. Lapowski 335
pathologic study of lungs in 152 necropsy cases of syphilis; J. L. Carrera 451
preliminary report on syphilitic and arsenical jaundice; G. O. Scott 208
primary; S. F. Dudley 79
prognosis of syphilis in light of recent progress; S. Pollitzer 693
reinfection, Chargin, 112; C. M. Williams 702
serologic cure in light of increasingly sensitive Wassermann tests; U. J. Wile and C. K. Halsey 68
tertiary syphilis of liver; H. L. Carretti 697
treatment of late syphilis; H. H. Hazen 211
treatment of syphilis of central nervous system; S. T. Nicholson 213

Syphilis—Continued PAGE
treatment of, with silver-salvarsan; Rille and Fruhwald..... 583
tuberculo-verrucosa; B. Lapowski..... 346
urticaria probably due to syphilis, clinical report; L. Hollander..... *55
verruco-tuberculosa; B. Lapowski..... 339
visceral syphilis; syphilis of stomach; U. J. Wile.....*543
vitiligo and its relation to syphilis, acquired or hereditary; W. H. Brown Dujardin and Von Haecke..... 213
vitiligo and syphilis; an examination of evidence for syphilitic origin of vitiligo; J. E. Lane..... 69
without primary lesion; A. Nordmann..... 203
Syphilitic aortic insufficiency; J. C. Meakins..... 698
eruption resembling herpes; H. E. Michelson..... 359
keratoderma; Zeisler 746
Syphilodermata after intensive treatment; Gilmour..... 742
Syringoma, multiple benign cystic epithelioma and syringoma; F. Wise.... 357

Tabes, intravenous injection of potassium iodid in; F. J. Devota..... 76
Taft, R.: Technic in radium treatment of keloid and other common skin lesions 698
Talbot, G.: Experiments on destruction of lice and nits..... 450
Tanner, F. W.: Cultural studies on an infection of skin by endomyces albicans *365
Taussig, F. J.: Precancerous lesions of skin of vulva; leukoplakic vulvitis, kraurosis, pruritus *621
Taylor, H. D.: Studies in X-ray effects; destructive action on blood cells.. 74
Studies in X-ray effects; stimulative action on lymphocytes..... 75
Theis, R. C.: Study of chemical composition of blood in cancer..... 324
Thomas, M. M.: Studies in X-ray effects; stimulative action on lymphocytes 75
Thompson, L.: Gumma of breast..... 695
Syphilis of bladder..... 694
Thomson, F.: Contact infection of chickenpox..... 77
Thrush; G. M. Olson..... 359
Tinea cruris; G. H. Fox..... 224
method of treating tinea; Gleason..... 581
unguium; G. H. Fox..... 722
Tongue, black (lingua nigra); Harris..... 93
"burning"; M. F. Engman.....*137
early diagnosis of cancer of tongue; M. Ferrand..... 207
geographical tongue; F. Wise..... 735
geographical tongue (erythema migrans); B. F. Ochs and Feldman.... 219
gumma of tongue; M. B. Parounagian..... 456
gumma of tongue and epithelioma; B. Lapowski..... 344
gummas of tongue: epitheliomatous degeneration; C. M. Williams..... 701
nevus of lower lip and lymphangioma of tongue; B. W. Howell..... 696
syphilis palmaris and leucoplakia of tongue and cheeks; B. Lapowski.. 335
Tonsil, chancre on right tonsil; M. B. Parounagian..... 460
epithelioma of tonsils, with syphilitic condition; M. B. Parounagian.. 458
Topley, W. W. C.; Vaccines in treatment of cutaneous disease..... 213
Trichophyton, cultural characters of trichophyton balcaneum cast., the cause of pseudopityriasis capitis; A. Castellani..... 321
currii; A. J. Chalmers and A. Marshall..... 320
rosaceum, two unusual cases of ringworm, one of them due to fungus (trichophyton rosaceum) producing pink cultures; M. B. Hartzell... *1
Trichophytosis, treatment of trichophytosis; M. Michael..... 691
Trimble, W. B.: Adenoma sebaceum..... 340
Chronic congestion of face: for diagnosis..... 466
Chronic erythema of face (for diagnosis)..... 699
Colloid milium 465, 700
Eczema of nipples..... 464

Trimble, W. B.—Continued PAGE
Epithelioma of penis: healed by curettage and acid nitrate mercury.... 733
Epithelioma of upper lip; superficial flat type..... 466
For diagnosis (probably lupus)..... 463
Kaposi's sarcoma 332
Lichen nitidus 468, 721
Melanoma 700
Necrotic granuloma 702
Osseous formation in lupus erythematosus.....*296
Pityriasis rubra pilaris..... 732
Ulcerating scarring of cheek (for diagnosis)..... 699
Trist, M. E.: Preservation of complement serum..... 207
Tuberculid, acne or papulonecrotic tuberculid; F. Wise..... 741
and their relation to tuberculosis of skin and other organs; R. C. Low.. 577
arsphenamin treatment of tuberculids; J. H. Stokes..... 573
erythema induratum of legs with tuberculids of fingers; D. Lieberthal.. 590
papulo-necrotic tuberculid; J. F. Smith, 212; L. Chargin, 337; I. Rosen.. 350
therapeutic management of tuberculids with specific reference to efficiency of arsphenamin; J. H. Stokes..... 72
Tuberculosis, chemotherapy in cutaneous tuberculosis; H. J. Gauvain..... 77
clinical studies in cutaneous aspects of tuberculosis; therapeutic management of tuberculids, with specific reference to efficiency of arsphenamin; J. H. Stokes..... 72
cutis; F. Wise..... 229
of mucous membrane of mouth; Strickler, 103; A. Rostenberg..... 708
of skin; D. Lieberthal..... 476
tuberculids in their relation to tuberculosis of skin and other organs; R. C. Low..... 577
verrucosa cutis; P. E. Bechet.....330, 712
Tumor, attempts to obtain transplantable tumor in higher species of animals; F. C. Mann..... 324
camphor oil; W. H. Mook and W. G. Wander.....*304
effect of X-ray on tumors; F. C. Wood and F. Prime..... 71
multiple benign tumor-like new growths; O. L. Levin..... 456
multiple tumors of mouse mamma: are they independent or metastatic; A. Fischer 72
origin of tumors; H. Ribbert..... 587
relation of inbreeding to tumor production; studies in incidence and inheritability of spontaneous tumors in mice; M. Slye..... 698
virulence or adaptation; W. H. Woglom..... 70
Tyler, A. F.: Syphilis of great vessels..... 695
Typhoid, gaseous gangrene in; M. M. Weinberg and Françon..... 581

Ulcer, circular ulcer of leg caused by administration of bromids; E. Ward 214
of foot; E. L. McEwen..... 599
phagedenic; E. L. McEwen, 600, 601; O. S Ormsby and Mitchell..... 478
ulcerating scarring of cheek (for diagnosis); W. B. Trimble..... 699
veneroid; G. M. Olson.....*279
Ulerythema ophryogenes; I. Rosen..... 353
Ultraviolet rays, action of ultraviolet rays on blood serum, leukocytes and bacteria; D. Sireci..... 696
Ureter, syphilis of kidney, ureter and suprarenal; U. J. Wile.....*413
Urticaria pigmentosa; F. Wise..... 223
probably due to syphilis; L. Hollander, *55; R. L. Sutton..... 200

Vaccination, multiple vaccination of eyelids; A. J. Bedell..... 584
present position of curative vaccination; H. G. Adamson..... 211
Vaccine therapy in diseases of skin; A. Whitfield..... 211
in diseases of skin; J. H. Sequeira..... 209
of cutaneous disease; J. M. H. MacLeod and W. W. C. Topley..... 213

PAGE

Varicella and herpes zoster; E. Feer 693
contact infection of chickenpox; F. Thomson 77
Variot: Wrinkled senile skin in child of two 455
Venereal diseases as we see them today; J. E. R. McDonagh 322
prophylaxis of; L. Le Clerc-Dandoy 213
Veneroid ulcer; G. M. Olson *279
Verrucae, case illustrating value of radium in verrucae planae; D. W. Montgomery and G. D. Culver 697
cure of multiple warts on face; C. Ind 449
multiple; L. Oulmann 357
Vessey, C. A.: Unusually large primary epithelioma of ocular conjunctiva 697
Vitiligo; Hartzell 101
and its relation to syphilis, acquired or hereditary; W. H. Brown, Dujardin and Von Haecke 213
and syphilis: an examination of evidence for syphilitic origin of vitiligo; J. E. Lane 69
Vulva, precancerous lesions of skin of vulva; leukoplakic vulvitis, kraurosis, pruritus; F. J. Taussig *621
Vulvitis, erosive; T. L. Driscoll *170

Wallhauser, H. J. F.: Case for diagnosis 215
Wander, W. G.: Camphor oil tumors *304
Ward, E.: Circular ulcer of leg caused by administration of bromids 214
Warts: See Verrucae.
Wassermann reaction, agreement in results of; H. C. Solomon 692
criticism of its reliability; C. F. White, A. T. McWhirter and H. Barber 78
delayed negative; G. McConnell 326
icebox fixation method in performance of Wassermann reaction; R. G. Owen and F. A. Martin 587
incidence of syphilis among white and colored troops as indicated by an analytical study of Wassermann results in over 10,000 cases; W. Levin 325
occurrence of variations in results of successive tests; clinical application of data; C. H. Browning and E. L. Kennaway 79
relation of aortic insufficiency to Wassermann test; J. E. Benjamin and S. J. Havre 325
serologic cure in light of increasingly sensitive Wassermann tests; U. J. Wile and C. K. Halsey 68
tyranny of Wassermann test: benevolent despotism; W. J. Highman ... 194
Waugh, J. F.: Molluscum contagiosum 593
Photograph of oriental sore 478
von Recklinghausen's disease 609
Webber, R.: Lupus of upper air passages 451
Weidman, F. D.: Clearing house for cutaneous fungi and blastomyces .. 683
Necropsy findings in case of congenital scleroderma and sclerodactylia .. *375
Weinberg, M. M.: Gaseous gangrene in typhoid 581
Weiss, C.: Laboratory and clinical studies bearing on causes of reactions following intravenous injections of arsphenamin and neo-arsphenamin. *235
Weiss, L.: Purpura annularis telangiectodes (Majocchi's disease) *520
Weiss, R. S.: Monilia candida infection of mouth; Moeller's disease, pneumococcus infection of tongue, etc *119
Welfeld, J.: Case for diagnosis 473
Western, G. T.: Vaccine therapy in diseases of skin 209
White, C. F.: Cerebrospinal fluid in syphilis 212
Wassermann test; criticism of its reliability 78
Whitehouse, H. H.: Ichthyotic conditions with erythema (for diagnosis) 724
Whitfield, A.: Vaccine therapy in diseases of skin 211
Whitfield's ointment 684
Whitfield's ointment; A. Whitfield 684
Wile, U. J.: Infective condyloma of mouth 97
Serologic cure in light of increasingly sensitive Wassermann tests 68
Syphilis of kidney, ureter and suprarenal *413

Wile, U. J.—Continued PAGE
Syphilis of liver....*139
Two unusual phases of hepatic syphilis....*656
Visceral syphilis; syphilis of stomach....*543
Williams, C. M: Gummas of tongue: epitheliomatous degeneration.... 701
Syphilitic reinfection 702
Wiltshire, H.: Hyperkeratosis of hair follicles in scurvy.... 447
Winfield, J. M.: Acute psoriasis and zoster.... 728
Wise, F.: Acne or papulo-necrotic tuberculid.... 741
Acro-asphyxia 340
Acrodermatitis chronica atrophicans.... 115
Bromid eruption 709
Case for diagnosis....112, 223, 346, 467
Case for diagnosis (leprosy or lupus erythematosus).... 228
Cheilitis glandularis 468
Dermatothlasia (so-called picker's disease).... 222
Epithelioma 739
Erythema perstans 739
Extensive keloidal scarring after burn.... 730
Folliculitis decalvans with seborrheic eczema.... 468
Generalized lichen planus.... 467
Geographical tongue 735
Glossitis 726
Lichen planus hypertrophicus with follicular lesions.... 222
Lupus erythematosus disseminatus.... 226
Lupus vulgaris 229
Lymphangioma circumscriptum 228
Multiple benign cystic epithelioma and syringoma.... 357
Neurodermite 736
Peculiar scarring in North African negro.... 222
Pityriasis lichenoides chronica.... 352
Tuberculosis cutis 229
Urticaria pigmentosa 223
Xeroderma pigmentosa 223
Winfield, J. M.: Erythema perstans.... 727
Wislocki, G. B.: Old age in relation to cell-overgrowth and cancer.... 67
Witherbee, W. D.: Practical method of roentgen-ray dosage without aid of radiometer *558
Studies in X-ray effects; destructive action on blood cells.... 74
Studies in X-ray effects; direct action of X-rays on transplantable cancers of mice.... 76
Studies on X-ray effects; stimulative action on lymphocytes.... 75
Withers, S. M.: Chronic papular itching eruption of axillae and pubes (Fordyce) *8
Woglom, W. H.: Size of spleen in immune mice.... 72
Virulence or adaptation.... 70
Wolf: Adenoma sebaceum.... 329
Wood, F. C.: Effect of X-ray on tumors.... 71
Wright, L. T.: Filarial elephantiasis.... 336
Wrinkled senile skin in child of two; Variot and Cailliau.... 455
skin, (gerodermie infantile); A. Souques.... 584
Würdemann, H. V.: Syphilitic neuroretinitis.... 585

Xanthoma diabeticorum; Schamberg.... 98
multiple, in boy; H. G. Adamson.... 695
Xeroderma pigmentosa; Harris, 90; F. Wise.... 223
pigmentosum acquisita; Hartzell.... 97

Yagle, E. M.: Hemolytic activity of solutions of arsphenamin and neoarsphenamin 690
Young, W. A.: Common diseases in British hospitals as seen in Sierra Leone 319

PAGE
Zeisler, E. P.: Acne 483
Arsphenamin eruption 746
Case for diagnosis 96
Devergie's disease 93
Epidermophyton infection 599
Infectious eczematoid dermatitis 476
Macular atrophy following syphilis 747
Majocchi's disease 613
Parapsoriasis 610
Syphilitic keratoderma 746
Zona, motor paralysis in zona; E. Baudouin and P. Lantuejoul 323
Zoster, acute psoriasis and zoster; J. M. Winfield 28

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CONTENTS

PAGE

X.—Precancerous Lesions of the Skin of the Vulva: Leukoplakic Vulvitis, Kraurosis, Pruritus. Fred J. Taussig, M.D., St. Louis 621

Hydrargism from the Application of a Weak Ammoniated Mercury Ointment in the Treatment of Psoriasis. Paul E. Becket, M.D., New York 636

XI.—"Spirochetes" Derived from Red Blood Corpuscles. Frederick Eberson, Ph.D., St. Louis 638

The Etiology of Eczema. Henry H. Hazen, M.D., Washington, D. C. 642

XII.—Skin Reactions to Apothesin and Quinin in Susceptible Persons. W. H. Mook, M.D., St. Louis 651

Two Unusual Phases of Hepatic Syphilis. Udo J. Wile, M.D., Ann Arbor, Mich. 656

The Physics of the Roentgen Ray. John S. Shearer, Ph.D., Ithaca, N. Y. 664

Obituary: William S. Gottheil 681

Correspondence:

Clearing House for Cutaneous Fungi and Blastomyces. Fred D. Weidman, M.D., Philadelphia 683

Whitfield's Ointment. Arthur Whitfield, London ... 684

Abstracts from Current Literature 685

Society Transactions:

New York Academy of Medicine, Section on Dermatology and Syphilis 699

New York Dermatological Society 722

Manhattan Dermatological Society 734

Chicago Dermatological Society 743

Book Reviews:

A Textbook of Dermatology. J. Darier 748

Common Diseases of the Skin, with Notes on Diagnosis and Treatment 749

Index to Current Literature 750

Index to Volume 753